United States
Department of
Agriculture

Forest Service

**Pacific
Southwest
Region**

MT. VIDA PLANNING AREA

Draft Supplement to the Final Environmental Impact Statement

Modoc National Forest

Cover Credit: The cover sketch shows the natural landscape of Pine Creek drainage looking west toward Goose Lake. The artist is Lynette Shoemaker, former wildlife biologist with the Warner Mountain Ranger District.

DRAFT SUPPLEMENT TO THE

FINAL ENVIRONMENTAL IMPACT STATEMENT

MT. VIDA PLANNING AREA

Modoc National Forest

Modoc County, California

May 1993

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ABSTRACT

On July 25, 1991, the Forest Service issued a Record of Decision (ROD) for the Final Environmental Impact Statement (FEIS) for integrated resource management in the Mt. Vida Planning Area. The development of the FEIS included public participation and provided for administrative review of the decision through appeal regulations. Two substantial appeals were received, and the decision was reviewed by the Regional Forester. The Regional Forester remanded the FEIS and ROD to the Modoc National Forest for clarification in the form of a Supplement to the FEIS, and issuance of a new ROD.

This document is a Draft Supplement to the FEIS (DSFEIS). This DSFEIS provides additional information requested by the Regional Forester. This DSFEIS contains supplemental information regarding: allocation of Marten habitat; consideration of an uneven-aged harvest alternative; and a revised Biological Evaluation that incorporates Threatened and Endangered Species, and

Regional Forester's Sensitive Species. Subsequent to release of the FEIS and the ROD, the Modoc N.F. Land and Resource Management Plan (LRMP) was approved on November 27, 1991. Therefore, changes are made in this DSFEIS, to make the Mt. Vida FEIS consistent with the LRMP, including implementation of Standards and Guidelines in the LRMP.

Public comment is invited regarding all additional information contained in this DSFEIS. Comments regarding any information not contained in this DSFEIS will be considered to be outside the scope of this document. **The comment period will expire on June 28, 1993.** Upon close of the comment period, all comments will be responded to, and a Final Supplement to the FEIS and new Record of Decision will be issued, and will be subject to the appeal regulations in effect at that time.

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SUMMARY

INTRODUCTION

On July 25, 1991, the Forest Service issued a Record of Decision (ROD) for the Final Environmental Impact Statement (FEIS) for integrated resource management in the Mt. Vida Planning Area. The FEIS had been developed with considerable participation by many persons and groups, including a two-day public meeting to jointly develop a Preferred Alternative. The ROD provided for administrative review as a result of the appeals process. The Regional Forester received two substantial appeals of the ROD. The Regional Forester reviewed the FEIS and the ROD, and remanded both to the Modoc National Forest for additional information and clarification.

To minimize confusion, this Draft Supplement to the FEIS (DSFEIS) will follow the same hierarchical structure as the original FEIS. Also, to relate the text in the original FEIS and this DSFEIS, the additional information and clarification required will follow a standard format. Each separate item of additional information will be preceded with five asterisks (*****) at the left-hand margin. The next line will reference the page number and paragraph of the original text to be supplemented. The format will be: (FEIS, I-1, para. 3); where FEIS refers to the original FEIS, I-1 refers to Chapter I-page 1, and para. 3 refers to paragraph 3. The third line will begin a very brief discussion of the subject of referenced paragraph(s). The fourth line will define the nature of the change, with the choices being: delete (delete designated portion); replace (delete and replace); or supplement (retain and supplement). The fifth line will begin the text of the additional information. When the new text looks similar to the replaced text, the changes will be highlighted in bold text. The last line of the change will be five pound signs (#####),to denote end of the change. Following is the first change, which will demonstrate the format.

*****
(FEIS, Summary-1, para. 4)
Discusses planning direction.
Replace.
The mission of the Forest Service is to provide a continuing flow of natural resource goods and services from National Forest system lands. To help fulfill this mission, we have proposed seven alternative courses of action for the management of all resources in the Mt. Vida area. Each of the alternatives was designed to reflect an integrated approach to resource management. The standards and guidelines **from the Modoc N.F. Land and Resource Management Plan** have been included in our analysis to provide direction for integrated resource management. These standards and guidelines are believed to represent scientifically sound management concepts.
#####

CHAPTER I
PURPOSE AND NEED

INTRODUCTION

*****
(FEIS, I-1, para. 3)
Discusses authority for integrated resource management.
Replace last sentence.
Under the direction of the National Environmental Policy Act of 1969, the National Forest Management Act of 1976, the California Wilderness Act of 1984, **and the Modoc National Forest Land and Resource Management Plan,** the Modoc National Forest has undertaken this task in the Mt. Vida area.
#####

SCOPE

This DSFEIS will disclose additional information and/or clarification about specific subjects discussed in the original FEIS. This will include the information requested by the Regional Forester, and new information since release of the original FEIS. This will include:

- Additional information regarding marten habit allocation;
- A revised Biological Evaluation that considers all species required to be analyzed;
- A clarification of rationale for not fully analyzing an uneven-aged timber management alternative;
- Additional information regarding California Spotted Owl habitat;
- Additional information regarding Willow Flycatcher habitat; and
- Additional information to make the original FEIS consistent with the Modoc National Forest Land and Resource Management Plan, including implementation of Standards and Guidelines from that Plan.

The invitation for public comment is limited only to the information presented in this DSFEIS, and/or how it relates to information presented in the original FEIS. All other comments will be considered to be outside the scope of this document. Adequate time was allowed for public comment and participation regarding all other subject matter during development of the original FEIS. **The public comment period for this DSFEIS will expire June 28, 1993.**

*****
(FEIS, I-3, para. 2 & 3)
Discusses planning direction and status of Modoc N.F. Land and Resource Management Plan.
Replace.
The Modoc National Forest Land and Resource Management Plan (LRMP) was approved November 27, 1993. As a result, it is now the guiding document for integrated resource management within the Mt. Vida Planning Area. The LRMP provides broad direction for management of all

resources, and estimates timber harvest goals that may be achieved when all LRMP direction is implemented. All actions and mitigations proposed are consistent with Standards and Guidelines in the LRMP.
#####

PURPOSE AND NEED

The Purpose and Need to prepare this Draft Supplement to the FEIS, is to disclose additional information and/or clarification requested by the Regional Forester. Also, other new information will be provided. This additional and new information will clarify the evaluation of environmental effects and will allow for a more informed decision when the Final Supplement to the FEIS and a new Record of Decision are issued.

*****
(FEIS, I-4, para. 2)
Refers to 1975 Timber Management Plan.
Delete last sentence.
No replacement wording.
#####

CHAPTER II
ALTERNATIVES

ALTERNATIVES ANALYZED IN DETAIL

DIRECTION COMMON TO ACTION ALTERNATIVES 2, 3, 4, 5 AND 6)

Timber.

Mitigation Measures -

*****

(FEIS, II-14, Para. 2)
Discusses mitigation to provide diversity of vegetation and wildlife habitat.
Replace Item 2)

2) To provide wildlife habitats for snag dependent species, leave dead trees standing unless they are clearly a hazard to human life or the residual stand through fungal infection. To provide vertical diversity of habitat, leave an average of 1 to 3 live, mature or over-mature trees per acre in all overstory-removal and clearcutting units. Leave trees will not be left in a uniform spacing, but rather will be left in random spacing, either alone or in natural appearing clumps. This practice will be subsequently referred to as Light Conifer Retention (LCR).

#####

THE PREFERRED ALTERNATIVE (ALTERNATIVE 7)

Timber.

Mitigation Measures -

*****

(FEIS, II-61, Para. 1)
Discusses mitigation to provide diversity of wildlife habitat.
Replace Item 2)

2) To provide wildlife habitats for snag dependent species, leave dead trees standing unless they are clearly a hazard to human life or the residual stand through fungal infection. To provide vertical diversity of habitat, leave an average of 1 to 3 live, mature or over-mature trees per acre in all overstory-removal and clearcutting units. Leave trees will not be left in a uniform spacing, but rather will be left in random spacing, either alone or in natural appearing clumps. This practice will be subsequently referred to as Light Conifer Retention (LCR).

#####

Vegetation.

Actions -

*****
(FEIS, II-62, Para. 2)
Discusses need to do Sensitive Plant Surveys.
Delete Item 1)
No replacement wording. Discussion of completed surveys is included in Chapter III of this DSFEIS.
#####

ACTIONS CONSIDERED BUT NOT GIVEN DETAILED STUDY

UNEVEN-AGED MANAGEMENT OPPORTUNITIES

*****
(FEIS, II-73, para. 5 & 6)
Discusses reason for dismissing uneven-aged management from full consideration.
Replace.
Current stand conditions resulting from past harvest practices in most stands addressed in the alternatives are presently better suited for even-aged management. Appendix G, Analysis of Silvicultural Methods (Pg. G-4 to G-6) documents the silvicultural prescriptions considered for those stands. Appendix G. (Pg. App. G-4 to G-6) documents the reasons that clearcut, overstory removal and uneven-aged group selection are the optimum harvest methods for the stands where they are prescribed. It also documents the reasons why shelterwood, commercial thinning and precommercial thinning are the appropriate treatments for the specific stands where they are prescribed.

Current stand conditions and terrain are not conducive to uneven-aged management. The majority of stands, proposed for timber harvest, are composed of white fir heavily infected with mistletoe and fomes annosus. Implementation of uneven-aged systems would merely perpetuate individual tree and stand destructive diseases (not all infected trees are removed). Many acres within the analysis area are steep and partial cutting (uneven-aged) usually results in some damage to residual trees. Since white fir predominates the stand composition, residual trees damaged would be white fir. In areas already heavily infected with mistletoe and fomes annosus this damage would result in further infection of residual trees and eventual stand deterioration.

Implementing any uneven-aged management prescription would reduce the flow of timber products and potential growth this project might yield as compared to the preferred alternative. This does not meet the project proposal objectives.

Managing stands under uneven-aged prescriptions would require repeated entries to produce estimated yields. These repeated entries would compound such problems as compaction and damage to residual trees.

There is no compelling reason to implement uneven-aged management. Visual quality objectives, wildlife, soils and watershed needs can be met in the FEIS preferred alternative. Vegetative diversity is maintained over the analysis area. Even-aged silvicultural practices can provide most of the benefits of uneven-aged silviculture by incorporating the key attributes in the prescriptions, including sufficient snags and snag recruitment trees, dead and down components, and leaving clumps of older trees and/or advanced regeneration.
#####

CHAPTER III
THE AFFECTED ENVIRONMENT

RESOURCE DESCRIPTIONS

VEGETATION

Sensitive Plant Species.

*****

(FEIS, III-33, para. 1 & 2)
Discusses that additional Sensitive Plant Surveys will be done.
Replace.
Areas with a high potential for sensitive plant species were surveyed in September, 1989 for the following sensitive and special interest plants, with none being found:

Species	Habitat	Season
Modoc bedstraw (*Galium glabrescens modocense*)	Gravelly slopes and under rocks	July
Warner Mtn. bedstraw (*G. serpenticum warnerense*)	Steep, talus slopes	June to July
Talus Collomia (*Colomia debilis larsenii*)	Talus slopes, high elevations	June to Aug.
Scheuchzeria (*Scheuchzeria palustris americana*)	Riparian areas, lake margins	July
Prostrate buckwheat (*Eriogonum prociduum*)	Dry, rocky, volcanic slopes with Pine	May to July

The previously surveyed areas were surveyed again in late June, 1992. Plus, additional areas were surveyed in the northern portions of the Planning Area. No individuals or populations of these species were found. Currently, there are no known sensitive plant populations within the Mt. Vida Planning Area.
#####

Management Indicator Species.

Marten.

*****

(FEIS, III-39, para. 3, 4, 5 & 6)
Discusses marten habitat.
Replace.

Forested habitats in the Warner Mountains on the Modoc NF are generally patchy in nature, primarily resultant from past fire history, past harvest practices and landform. Timbered stands are often isolated, and surrounded by open, bare ridges or low shrub communities dominated by sagebrush and grasses. Because of the location of the Warner Mountains in the northeast part of California, where moisture is limiting, timbered stands often tend to be stocked with smaller, shorter trees than similar habitats further interior in the state.

Lodgepole stands are commonly found along meadow stringers and on sites that tend to have saturated soils until late in the spring. Lodgepole stands tend to be densely stocked with small stems. Even mature lodgepole stands tend to have smaller stems, often less than 20 inches in diameter at breast height.

The Habitat Capability Model (Shimamoto and Airola. 1981. pgs. 194-197) for marten, describes high, medium and low capability habitat parameters for marten. In past references, when "primary habitat" was referenced, it was equivalent to high capability, and "secondary habitat" was equivalent to medium capability. These terms are no longer applicable to this discussion of marten habitat. "Moderate" habitat capability is defined by Freel (Freel, 1991), and has been used in this supplemental assessment because it is more current and is the Region 5 USFS prescribed method to rate and/or describe habitat. The Modoc NF LRMP (USDA. 1991. p. 4-27), describes standards and guidelines to be used in the designation of 14 marten territories on the Forest. The Standards and Guidelines describe territories with "moderate" habitat capability, which when combined into a network of 14 territories would provide habitat for a viable population.

One of the 14 marten territories lies within the Mt. Vida Planning Area (see Figure III-19), and another lies outside, but adjacent to and southeast of the Mt. Vida Planning Area. While no marten sightings had been recorded from the Mt. Vida Planning Area and adjacent Compartments, suitable habitat was thought to exist there. Thus, consistent with Region 5-USFS planning direction, marten territories were tentatively located in the Mt. Vida Planning Area and Compartment 304 by the Modoc NF LRMP (USDA. 1991. pg. 4-27). "Validation" of these territories was planned to occur as a monitoring action of LRMP implementation. This "validation" was planned to occur every 5 years or be "project induced". Publication of the Mt. Vida FEIS preceded publication of the LRMP, therefore this supplemental assessment is the first "project induced validation" of marten territories as a step toward implementation of the plan.

Criteria for "validation" of these territories are described in the LRMP (USDA 1991. pg. 4-27), including: about 2000 acres of habitat with 60% in seral stages 4 B/C; 20% in seral stages 3 B/C and 20% in younger, more open stages. Snags, dead-and-down material, and proximity to water also weighed heavily on selection of the areas. Additional factors included the need for connectivity to similar habitats within a reasonable distance, and some linkage to riparian corridors.

The marten habitat within the planning area (see Figure III-19), contains 2759 acres of suitable habitat at the moderate capability level as described by Freel (Freel, 1991). Table III-3 displays the seral stage distribution of these acres. Typically, this habitat is a mosaic of suitable timber stands interspersed with non-timbered vegetation. Usually, the non-timbered stands are linear in shape, often following drainages and south aspect slopes.

The marten habitat within the planning area is connected to other habitats which form the District and Forest network. There are 550 acres (see Figure III-19) in the southeast portion of the planning area, that serve as a corridor to connect the planning area habitat to the next network habitat to the south. This corridor is composed of 333 acres of timber stands and 217 acres of non-timbered stands. The same mosaic described for the habitat above, also occurs in this corridor. These 550 acres are within an area designated Semi-Primitive, Non-motorized (SPNM) in the Modoc N.F. LRMP. The seral stage distribution of the 333 acres of timber stands in the southeast corridor are displayed in Table III-3.

Immediately outside the planning area, there is an additional 479 acre corridor connecting the planning area habitat to the northeast toward the Fremont NF in USFS Region 6. This 479 acre corridor consists of 408 acres of lodgepole pine and 71 acres of meadow habitat. Lodgepole pine stands are considered suitable corridor for martens because several publications (USDA. 1989c, Freel. 1991, Simon. 1980, and Spencer. 1981), document lodgepole as suitable marten habitat. Also, marten use areas on the Plumas and Tahoe NFs have been in lodgepole habitats, and one of two recent sightings of marten on the Warner Mountain District was in lodgepole/meadow habitat. Table III-3 displays the seral stage distribution of the 408 acres of lodgepole stands.

The Planning Area was surveyed for martens in 1992 using the USFS R-5's "A Survey Protocol for Forest Carnivores in Proposed Management Activity Areas", June, 1992. About 450 track plate nights were expended within the Planning Area, with no marten tracks recorded (Oneil and Sanger, 1992).

Following is a table of acres and percents of seral stages in the marten habitat and the corridor (southeast) within the planning area, and the corridor (northeast) adjacent to the planning area.

TABLE III-3

ACRES AND PERCENT BY SERAL STAGE OF MODERATE CAPABILITY MARTEN HABITAT, AND CORRIDORS WITHIN OR ADJACENT TO THE MT. VIDA PLANNING AREA

TIMBER TYPE	SERAL STAGE	SUITABLE HABITAT ACRES	SUITABLE HABITAT %	SOUTHEAST CORRIDOR ACRES	SOUTHEAST CORRIDOR %	NORTHEAST CORRIDOR ACRES	NORTHEAST CORRIDOR %
L2G	L2	43	1.6	0	0	0	0
L2N	L2	56	2.0	0	0	0	0
M2G	M2	0	0	47	14.1	0	0
SUBTOTAL	**2**	**99**	**3.6**	**47**	**14.1**	**0**	**0**
L3P	L3A	71	2.6	0	0	0	0
SUBTOTAL	**3A**	**71**	**2.6**	**0**	**0**	**0**	**0**
L3G	L3C	209	7.6	0	0	101	24.7
L3N	L3B	114	4.1	0	0	0	0
M3N	M3B	86	3.1	69	20.7	0	0
M3G	M3C	270	9.8	126	37.9	0	0
P3N	P3B	16	0.6	0	0	0	0
W3N	W3B	23	0.8	0	0	0	0
W3G	W3C	297	10.8	0	0	0	0
SUBTOTAL	**3B/C**	**1015**	**36.8**	**195**	**58.6**	**101**	**24.7**
M4P	M4A	0	0	0	0	3	0.8
M6G	M4A	0	0	0	0	25	6.1
SUBTOTAL	**4A**	**0**	**0**	**0**	**0**	**28**	**6.9**
L6G	L4B	0	0	0	0	42	10.3
M4N	M4B	567	20.5	35	10.5	79	19.4
M4G	M4C	325	11.8	56	16.8	158	38.7
W4N	W4B	471	17.1	0	0	0	0
W4G	W4C	211	7.6	0	0	0	0
SUBTOTAL	**4B/C**	**1574**	**57.0**	**91**	**27.3**	**279**	**68.4**
TOTAL	**ALL**	**2759**	**100.0**	**333**	**100.0**	**408**	**100.0**

#####

Sensitive Wildlife Species.

*****
(FEIS, III-39, para. 7)
Discusses Sensitive Species.
Replace.
The Forest Service lists wildlife species needing special management to prevent federal listing as threatened or endangered species. Goshawks, martens, California Spotted Owl and Willow Flycatcher are the sensitive species known or suspected to occur in the planning area. The marten habitat is discussed above, and goshawk habitat is discussed on page III-38 in the original FEIS.

Willow flycatchers require dense willow habitat within 3 feet of the ground for nesting. Information on minimum patch size is not readily available, however dense willow patches of 2-5 acres are generally thought to be sufficient in size. Willow flycatcher habitat as described above can generally be found along riparian corridors and in high elevation meadows containing willows. No patches of dense willows as described above occur in the Mt. Vida planning area. A few "stringers" of willows occur along drainages in the upper reaches of the area, however not in sufficient patch size to provide suitable nesting habitat for willow flycatchers. Presently, these willow "stringers" are grazed annually, resulting in a "browse line" up to about 4 feet off the ground.

In 1989, the planning area was surveyed for Northern Spotted Owls (see **Threatened and Endangered Wildlife Species)**, with none being found. From March through July of 1992, the planning area was surveyed for California Spotted Owls, with none being found. The methods and results of the survey were documented in a Cumulative Effects Analysis (CEA) which is on file at the Modoc N.F. Supervisor's office, and at the Warner Mountain Ranger District office.
#####

Threatened and Endangered Wildlife Species.

*****
(FEIS, III-40, para. 1)
Discusses Spotted Owl.
Supplement or Replace.
The discussion in the above reference, refers to the Northern Spotted Owl.
#####

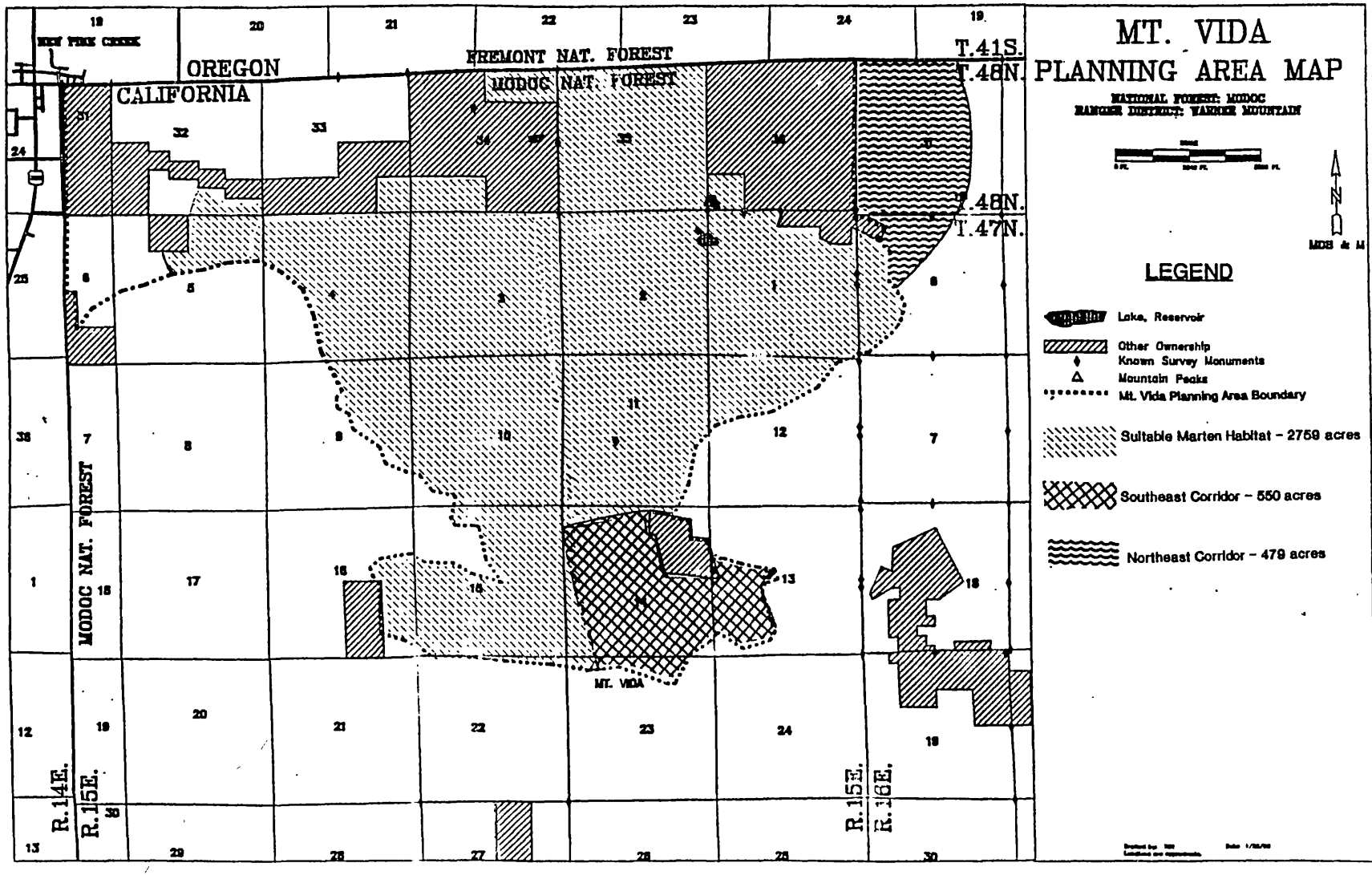

Figure III–19. Marten habitat and corridors.

CHAPTER IV
ENVIRONMENTAL CONSEQUENCES
TIMBER

*****
(FEIS, IV-38, para. 5)
Discusses 1975 Timber Management Plan calculation of ASQ.
Replace.
The number of acres harvested each year is used to monitor the implementation of the Modoc N. F. Land and Resource Management Plan (LRMP). If the projected acreage is not being harvested and regenerated, then the capability of the forest to provide the estimated sustained yield is reduced. The volume of wood (MBF) removed during logging is also an indicator of the level of sustained yield that can be attained. The LRMP calculates an Allowable Sale Quantity (ASQ) for the Modoc National Forest. This is the estimated maximum sustained yield volume that can be harvested annually on the Modoc National Forest when all Standards and Guidelines are implemented. The ASQ is calculated based on acres by timber type and the inventory and growth rates associated with each of those timber types. It is difficult to estimate the planning area's share of the ASQ because the available harvest volume can vary significantly from acre to acre, depending on which Standards and Guidelines are being applied.
#####

*****
(FEIS, IV-39, para. 4)
Discusses implementation of Timber Management Plan.
Replace.

> **Implementation of the Modoc N.F. Land and Resource Management Plan.** The number of acres treated by timber harvest or thinning differs widely among alternatives (Table II-1, 1c and Figure IV-5). Alternative 1 proposes no timber harvest. Alternatives 2 and 4 treat the fewest acres of the Action Alternatives, and Alternative 6 treats the most acres. Volume harvested also differs among alternatives (Table II-1, 1a and Figure IV-6). Alternatives 2 and 4 each harvest less than 4000 MBF. Alternatives 3, 5, and 7 harvest between 6800 and 7800 MBF. As with acres treated, Alternative 6 harvests the most volume of timber (13,900 MBF). Alternative 1 proposes no timber harvest.
>
> Application of Light Conifer Retention (LCR) in clearcuts and overstory removal units will result in a slight but unestimable reduction in harvest volume for Alternatives 2, 3, 4, 5, 6 and 7. This reduction will not appreciably change the total harvest volume for each alternative. Thus, the relative differences between alternatives should not change.

#####

*****
(FEIS, IV-41, para. 3)
Discusses effects of failure to reforest.
Replace.
Cumulative Effects - The Modoc **Land and Resource Management Plan's** calculation of ASQ was based on successfully reforesting harvested acres. Alternatives which do not successfully

regenerate harvested acres will result in lower calculations of ASQ in the future. As stated above, Alternative 3 is expected to achieve no more than 30 percent seedling survival one year after planting, while the other Action Alternatives should achieve at least 85 percent survival. Light Conifer Retention (LCR) is not expected to significantly reduce reforestation success.
#####

VEGETATION

INTRODUCTION

*****
(FEIS, IV-43, para. 7)
Discusses effects on Sensitive, Threatened and Endangered plant species.
Supplement.
Page III-33 identifies five sensitive and special interest plant species suspected to occur within the planning area. A survey for these species was conducted in September, 1989, **and again in June 1992.** None were found. No Threatened or Endangered plant species are known to exist within the planning area. The Biological Evaluation **and the Supplemental Biological Evaluation** for the Mt. Vida Planning Area **(See Appendicies L and M)** assess the impacts of Alternative 7 on the Threatened, Endangered, or Sensitive species for this area.
#####

EFFECTS

Direct and Indirect Effects -

*****
(FEIS, IV-44, para. 5)
Discusses no effect but identifies need for additional surveys.
Replace.
Sensitive Plant Species. No sensitive plant species were found within the planning area, during either of the surveys conducted. Thus, there are no impacts.
#####

VISUAL RESOURCES

INTRODUCTION

*****
(FEIS, IV-45, para. 2)
Discusses effects of proposed actions.
Replace.
Effects on visual resources are measured by whether or not the proposed action meets the inventoried Visual Quality Objective. Clearcutting and road construction are the actions that have the biggest impacts on visual quality, **although the effects of clearcutting are reduced through**

the application of Light Conifer Retention. All proposed actions were evaluated to see if they met the inventoried VQOs. Size, shape, and location of harvest units were considered during the evaluation. If an action did not meet the criteria for the inventoried VQO, the change in VQO was reported as an effect. Acres that met semi-primitive non-motorized recreation objectives automatically qualified as Retention areas.
#####

WILDLIFE

INTRODUCTION

*****
(FEIS, IV-49, para. 6)
Refers to location of Biological Evaluation.
Replace.
To quantify the effects of each alternative on Sensitive species, a relative scale is used for comparison (Table IV-1, 7c). A rating of 10 indicates optimal habitat capability, whereas a rating of 0 is indicative of a lack of habitat. Effects are estimated by comparing the rating for each Action Alternative to the rating for Alternative 1 (No Action). There are no known threatened or endangered species in the planning area. The species of special interest is the peregrine falcon. The Biological Evaluation **and the Supplemental Biological Evaluation** for the Mt. Vida Planning Area **(See Appendicies L and M)** assess the impacts of Alternative 7 on the Threatened, Endangered, or Sensitive species for this area.
#####

*****
(FEIS, IV-49, para. 7)
Discusses effects of harvest systems.
Replace.
Seral stages display the overall vegetative composition of an area. Although a given MIS may favor a specific seral stage, a balance of seral stages is desired for all species. Typically, timber harvest replaces an older stand with an early successional stage stand. Clearcutting followed by reforestation replaces mature sawtimber stands with seedling and sapling stands. Overstory removal replaces mature stands with poles or immature sawtimber. **Light Conifer Retention, when applied to clearcuts and overstory removal retains a small component of mature and over-mature stands. This mature and over-mature component adds vertical diversity that creates foraging, roosting and nesting habitats for many species of birds and mammals.** Seed-step shelterwood, commercial thinning, precommercial thinning, and most special prescriptions do not change the age class of the stand. However, these treatments decrease stand density. The long-term productivity of wildlife species is enhanced by a balanced distribution of age classes.
#####

EFFECTS

Direct and Indirect Effects

*****

(FEIS, IV-50, para. 6)
Discusses direct and indirect effects on Marten Habitat
Replace.

Management Indicator Species - Marten (Table IV-1,7b). Habitat capability for marten is moderate under all alternatives. Alternative 1 proposes no harvest, and thus retains all 2759 acres of suitable habitat, but does not propose any active management to improve habitat. All other alternatives propose varying levels of harvest in suitable habitat, and active management to improve habitat conditions. These effects are summarized below:

	Acres of suitable habitat harvested	Acres of suitable habitat remaining	Acres of habitat improvement
Alternative 2	179	2580	NONE
Alternative 3	371	2388	1000
Alternative 4	225	2534	1000
Alternative 5	461	2298	NONE
Alternative 6	631	2128	NONE
Alternative 7	436	2323	850

Timber harvest in suitable habitat does not fragment the habitat to the extent that it becomes unuseable. The natural occurrence is for timber stands to be interspersed with non-timber vegetation. The timber harvest in all alternatives is many small units with large areas of timber stands left in their natural condition around the harvest units. Therefore, the timber harvest mimics natural occurrence, but on a smaller scale. The harvest is not so extensive as to form barriers to marten travel.

Alternative 6 is the only alternative to propose timber harvest in the 550-acre corridor to the southeast. Alternative proposes to harvest 142 acres in this corridor. This proposed harvest would reduce the total acreage of timber in the corridor to 144 acres. That would greatly reduce the effectiveness of that corridor. All other alternatives would have no effect on that corridor. The 479-acre corridor to the northeast is outside the planning area, and is not affected by any management proposals in this planning area.

#####

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#####

ACRONYMS

*****
(FEIS, AC-ALL)
Lists acronyms.
Supplement.

DSFEIS	- Draft Supplement to the Final Environmental Impact Statement
LCR	- Light Conifer Retention
LRMP	- (Modoc N. F.) Land and Resource Management Plan
ROD	- Record Of Decision

#####

GLOSSARY

*****

(FEIS, GL-ALL)
Provides definitions.
Supplement.
Light Conifer Retention The purposeful failure to designate for cutting, 1 to 3 coniferous trees per acre larger than 10" DBH, where clearcutting or overstory removal have been prescribed.
#####

SILVICULTURAL PRACTICES

HARVEST PRACTICES

*****
(FEIS, App F-1, para. 4)
Discusses harvest prescription.
Supplement.
Where overstory removal and clearcutting are prescribed, Light Conifer Retention will be applied. This mitigation measure will retain 1 to 3 mature or over-mature trees per acre, after harvest. These trees will add to the diversity of species and to the diversity of the vertical structure of the vegetation community.
#####

APPENDIX L. BIOLOGICAL EVALUATION

Mt. Vida Planning Area
Modoc National Forest

This biological evaluation assesses the impacts of implementing the Preferred Alternative of the Mt. Vida Planning Area Final Environmental Impact Statement (FEIS), on federally listed species and selected candidate species. On December 12, 1989, the Warner Mt. Ranger District initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) and submitted a species list of threatened, endangered, and candidate species that would be addressed in a biological evaluation for the planning area. The USFWS response dated February 4, 1990, concurred with our list and added another candidate species, the spotted bat (*Euderma maculatum*), to that list. Analysis of the Mt. Vida Planning Area revealed a peregrine falcon (*Falco peregrinus anatum*) observation in July of 1979. Therefore, the peregrine falcon was added to the list of species to be addressed in the biological evaluation.

There are three endangered species that could potentially occur in the proposed project area: 1) bald eagle (*Haliaeetus leucocephalus*), 2) peregrine falcon and 3) Shasta crayfish (*Pacifastacus fortis*). There is one threatened species that could potentially occur in the proposed project area, the northern spotted owl (*Strix occidentalis caurina*). In addition, several candidate species could potentially occur in the proposed project area. These include: 1) spotted bat, 2) Goose Lake sucker (*Catostomus occidentalis lacusanserinus*), 3) Goose Lake redband trout (*Oncorhynchus mykiss* ssp.), 4) fingernail clam (*Pisidium ultramontanum*), 5) prostrate buckwheat (*Eriogonum prociduum*), 6) Modoc bedstraw (*Galium glabrescens* subspp. *modocense*), 7) Warner bedstraw (*Galium serpenticum* subspp. *warnerense*), and 8) pygmy monkeyflower (*Mimulus pygmaeus*).

DESCRIPTION OF PROJECT

The Mt. Vida Planning Area is located on the Warner Mountain Ranger District, Modoc National Forest approximately 28 miles due north of Cedarville, California (see Figure I-1). The Mt. Vida area is characterized by dense, coniferous forests interspersed with openings, clean air, rugged topography, primative and developed recreation opportunities, historic and prehistoric resources, perennial and intermittent streams, lakes, and numerous fish and wildlife species. The area encompasses 8615 acres that include 6857 acres of National Forest lands and 1758 acres of private lands. Three RARE II roadless areas are part of the planning area.

The vegetative communities in the area include montane chaparral, dry meadows and grasslands, riparian areas, scattered stands of aspen, juniper woodlands, and pine, fir, and mixed conifer forests (Figures I-2 and I-3). Fifty-eight percent of the planning area is occupied by commercial conifer forests composed of white fir, western white pine, ponderosa pine, lodgepole pine, and incense cedar.

The Preferred Alternative is designed to remove 7.8 MMBF of mixed conifer using several harvest methods. These include clearcutting 274 acres (5218 MBF), overstory removal on 257 acres (2365 MBF), group selection harvest on 10 acres (136 MBF), and seed step shelterwood on 7 acres (81 MBF). Roads will be constructed (4.7 miles), reconstructed (4.8 miles), closed (4.8 miles), and obliterated and restored to natural conditions (4.3 miles). A summary of all proposed alternatives,

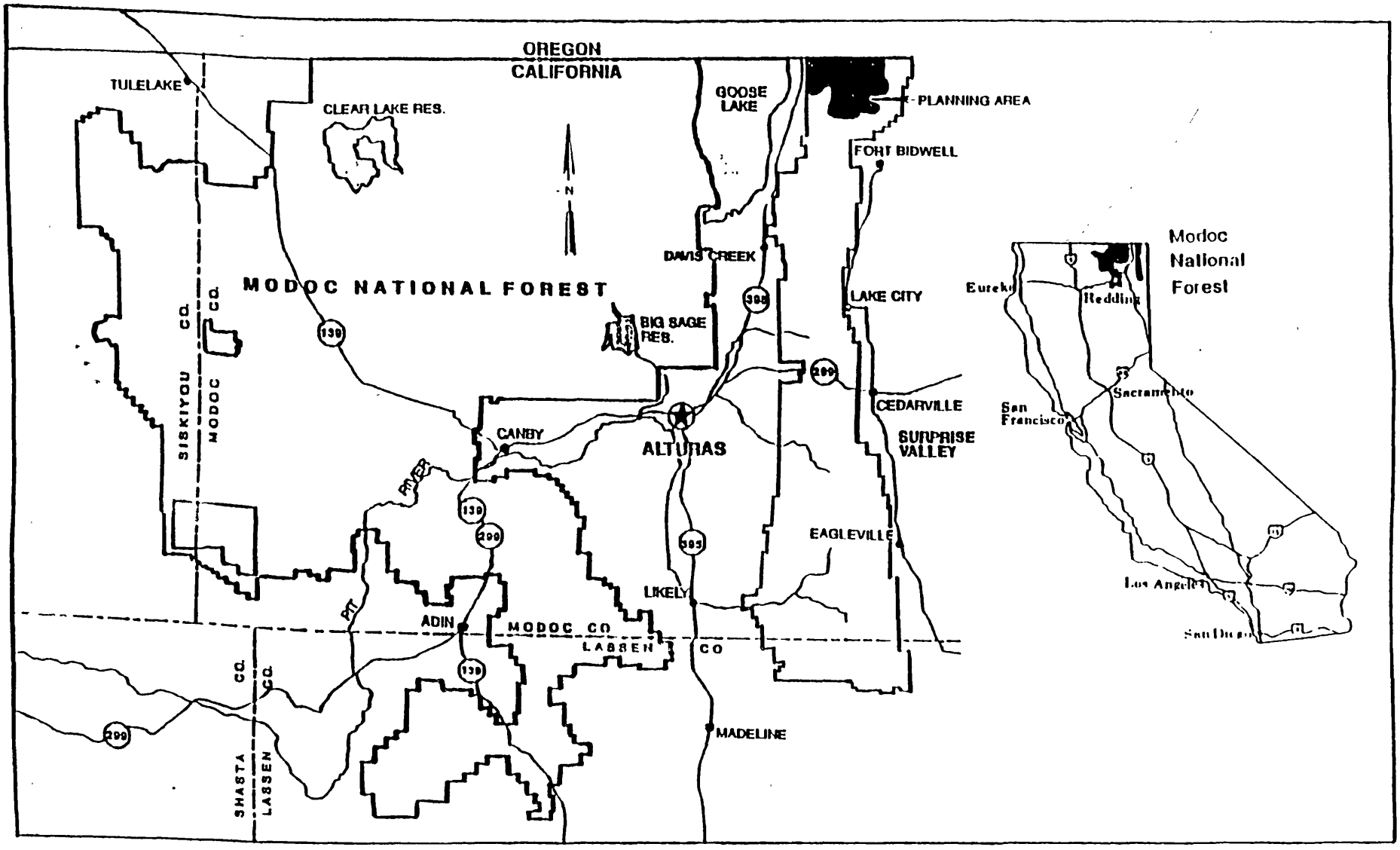

Figure I – 1. Location of the Mt. Vida Planning Area in northeast California.

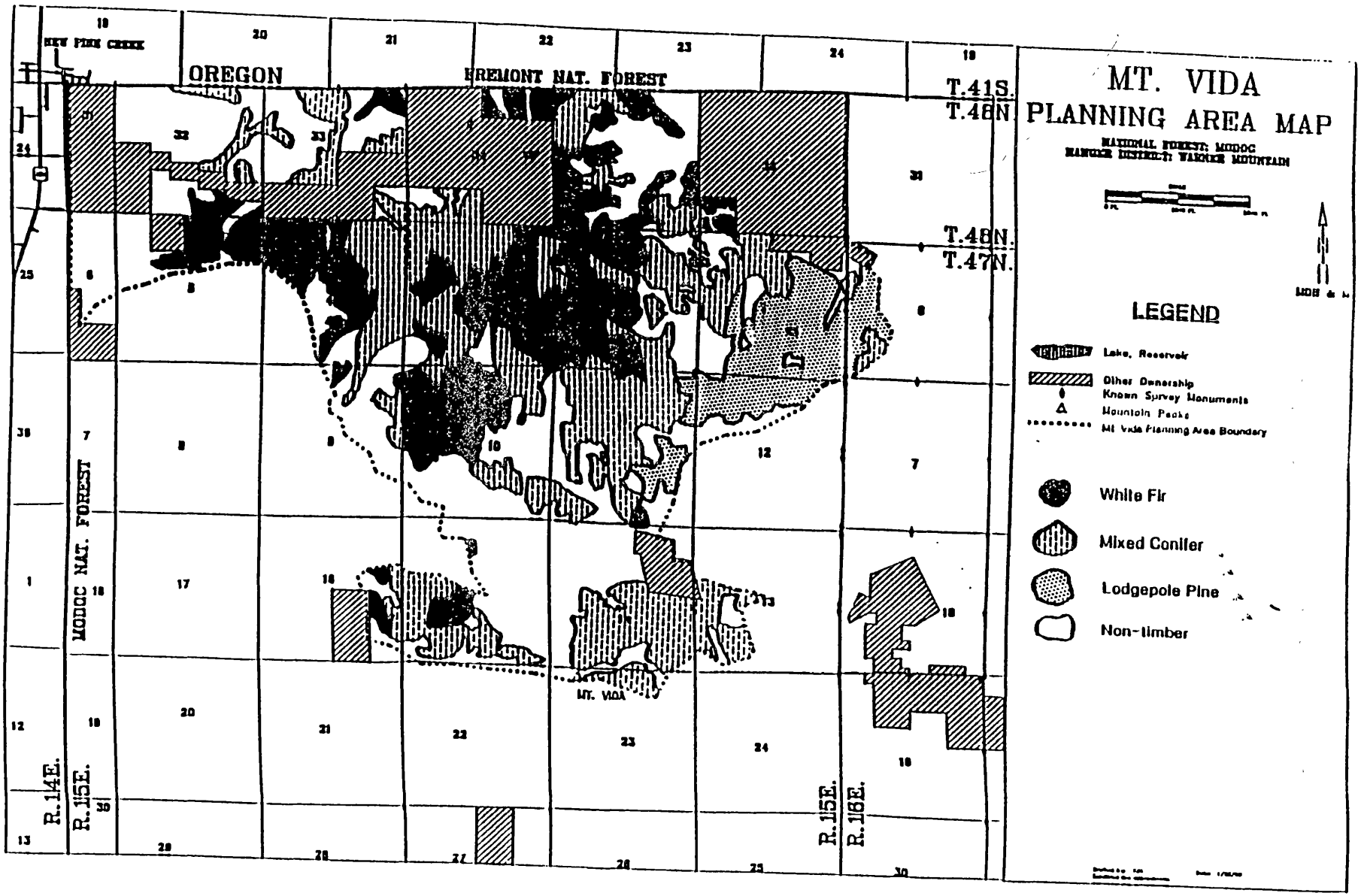

Figure I – 2. Major timber types for the planning area.

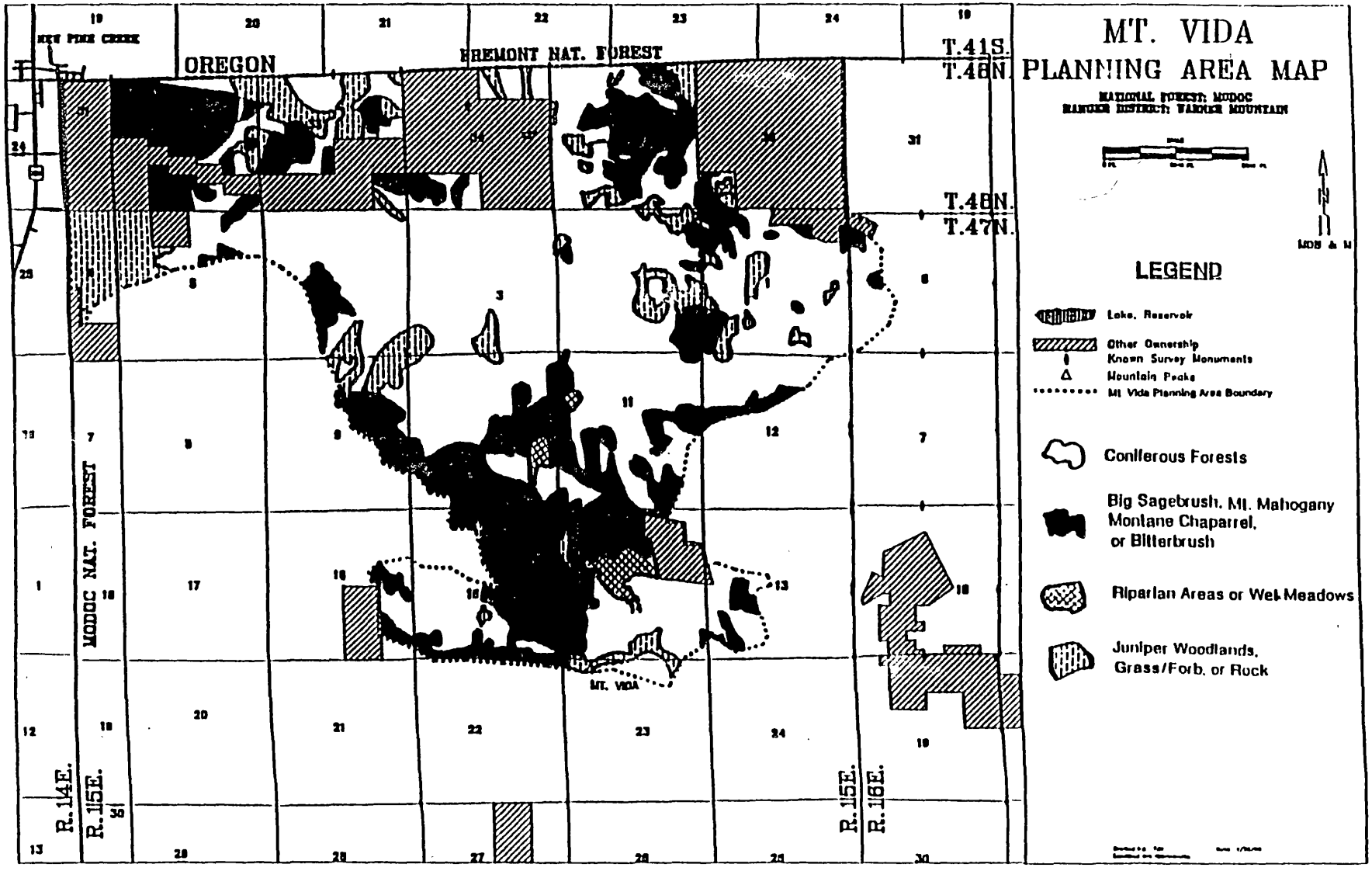

Figure I – 3. Vegetative communities in the planning area.

including the preferred alternative can be found in Appendix A. The alternatives are displayed on maps in Appendix B. The key indicator table (Appendix C) displays outputs or results of each proposed alternative.

AFFECTED ENVIRONMENT

Bald Eagle
Bald eagles are occasionally observed in the planning area, but are transitory visitors and are not found nesting or wintering in the area. Most observations are of birds flying over the area. The closest nest territory is located 15 miles to the west at the Meteorite Stock Tank on the Devil's Garden Ranger District (Studinski, pers. comm.).

Peregrine Falcon
A peregrine falcon was observed in the southern boundary of the planning area in 1979, but no sightings have been recorded since that time. Suitable nesting habitat exists on the north face of Mt. Vida. This cliff has also been used by nesting prairie falcons. This area is in a separate watershed and is located 1 mile from any of the proposed activities.

Spotted Owl
Suitable habitat for the spotted owl was surveyed in May and July 1989. The closest spotted owl observation to the planning area was recorded on the Modoc's Doublehead Ranger District in the Medicine Lake Highlands 78 miles to the southwest. The National Forests surrounding the Modoc (Shasta-Trinity and Lassen) have identified Spotted Owl Habitat Areas.

Spotted Bat
Spotted bats are not believed to exist in the planning area. Spotted bats live primarily in crevices in rocky cliffs and canyons (Whitaker 1980). The planning area is outside of the known range for this species (Ingles 1965).

Shasta Crayfish
Shasta crayfish are not believed to exist in or downstream of the planning area. No crayfish were found during 1989 and 1990 fish habitat and biologic surveys conducted in Pine Creek, Cottonwood Creek, Bidwell Creek, and Barnes Creek. Crayfish were also not found in Cave or Lily Lakes or their tributaries. The planning area lacks suitable habitats, as described for crayfish by Daniels (pers. comm., February 1989) and in Eng and Daniels 1982.

Fingernail Clam
Fingernail clams are not believed to exist in or downstream of the planning area. This is based on the absence of suitable habitats as described by Eng (pers. comm., February 1989) and the distance of the planning area from the known distributions of the species (Taylor 1961 and 1981).

Goose Lake Redband Trout
The migratory population of Goose Lake redband trout are unable to access Pine Creek because of downstream diversions eliminating direct contact with Goose Lake (Chappell, pers. comm.; Williams, pers. comm.). Stream surveys in 1989 and 1990 indicated that resident populations are

below the planning in Pine Creek and Cottonwood Creek but not in Barnes Creek. They are not known to be in Cave or Lily Lakes, both closed systems. Bidwell Creek, the other live stream associated with the planning area, drains into the Lahontan Basin, not part of Goose Lake redband trout distribution.

Goose Lake Sucker
Goose Lake suckers are found downstream of the planning area in Pine Creek below the barriers to the migratory Goose Lake redband trout (White, pers. comm.).

Sensitive Plants
There are four candidate plants that could occur within the Mt. Vida project area:

Scientific Name	Common Name	Location on Modoc National Forest	Habitat
Eriogonum prociduum	Prostrate Buckwheat	Warner Mountain Ranger District Big Valley Ranger District	Dry, rocky, volcanic slopes and hills, mostly in yellow pine or pinyon woodlands.
Galium glabrescens (Ehrend.) Demp. & Ehrend. ssp. *modocense* Demp. & Ehrend	Modoc Bedstraw	Warner Mountain Ranger District	Gravelly slopes and under rocks
Galium serpenticum monk. ssp. *warnerense* Demp. & Ehrend.	Warner Mountain Bedstraw	Suspected to occur on the Modoc National Forest	Steep talus slopes
Mimulus pygameus Grant	Pygmy Monkey Flower	Big Valley Ranger District	Moist soil areas in meadows along streams and on the muddy soil of desicating pools or flats.

No federally listed threatened or endangered plant species are known to exist in the planning area.

ANALYSIS OF EFFECTS AND MANAGEMENT CONSTRAINTS

Although bald eagles have been observed flying over the Mt. Vida area, nesting is unlikely due to the elevation (>7000 feet) and size of potential foraging areas at Cave and Lily Lake (Studinski, pers. comm.). Cave and Lily Lake also receive heavy recreation use throughout the summer. Cave Lake Campground, with 6 sites, averaged about 60 percent occupancy from June 1 to September 30. Lily Lake Campground, with 6 sites, averaged about 90 percent occupancy during this season.

The nearest alternative foraging areas are Lake Anne to the southeast (6 miles), Goose Lake to the west (6 miles), and Briles Reservoir to the south (15 miles). Goose Lake is considered marginal as a foraging area (Studinski, pers. comm.) and both Lake Anne and Briles Reservoir are small (80 and 20 acres respectively) in size. The combination of high elevation and distance to foraging areas renders most the area unsuitable for bald eagle nesting or wintering.

Impacts to peregine falcon habitat are not anticipated. The nearest timber harvest is 1 mile to the west of a historical nest site. This site is located on the north face of Mt. Vida in North Star Basin, an area that drains easterly towards Surprise Valley. The historic site has been unoccupied for 12 years. Prairie falcons currently use the cliff face. All proposed timber harvest occurs in the Cottonwood Creek drainage which flows into Goose Lake. These two drainages are physically separated by a large ridge. Other harvest units are located over 2 miles away.

Three field surveys conducted in 1989 did not reveal the presence of any spotted owls. Although this in itself does not rule out the possibility of any owls using the area, the combination of naturally fragmented habitats, elevation, and distance to known occupied territories probably renders the planning area unsuitable to spotted owls.

Impacts to any potential spotted bat habitat are not anticipated since the planning area is outside of the known range of the species. In addition, suitable roosting habitat (i.e. large cliff faces) exist in the project area.

Habitat for the resident Goose Lake redband trout and Goose Lake sucker and potential future habitat for the migratory Goose Lake redband trout will be maintained or enhanced through implementation of State certified and Environmental Protection Agency approved Best Management Practices (BMPs) for water quality.

A Cumulative Watershed Effects Analysis was made for Pine Creek and Cottonwood Creek. The analysis assesses the natural capability of the watershed to withstand adverse effects, resulting in an index (Threshold of Concern) that indicates the level at which activities have a high potential for resulting in stream course damege. Thresholds of Concern for the Pine Creek and Cottonwood Creek watersheds are 8% and 5%, respectively. The proposed activities under the Preferred Alternative are 5.7% and 3.4%, respectively, of the Thresholds of Concern. Adverse impacts to the habitat for the Goose Lake redband trout and Goose Lake sucker are not anticipated.

Prior to project implementation, areas will be surveyed for sensitive plant populations. All sensitive plant populations will be protected from disturbance.

Although the area has been surveyed for threatened and endangered species, if any of these species are found during project implementation, consultation will be re-initiated with the U.S. Fish and Wildlife Service.

DETERMINATION

It is our opinion that the implementation of the Preferred Alternative of the FEIS, with required management constraints, may affect but is not likely to adversely affect threatened, endangered, or candidate species, their essential habitats, or the recovery of these species.

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Martin G Yamagiwa 11 June 91

Prepared by: Date:
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District Wildlife Biologist

APPENDIX A

ALTERNATIVES

The first six alternatives for management of resources in the Mt. Vida area were developed by the Interdisciplinary Team following the scoping processes. Each alternative was developed to address one or more of the planning issues. Alternative 7, the Preferred Alternative, was developed in response to the public comments received on the DEIS. All of the alternatives were designed to exhibit a range of responses for the following five issues:

What harvesting practices will be used?
What post-harvest cultural practices will be used?
How will roadless areas be affected?
What level of forest road development will be considered?
How will mineral exploration be managed?

In addition to addressing the above issues, some of the alternatives were designed to address other issues specifically. If applicable, the specific issue or issues is identified in the summary of that alternative.

ALTERNATIVE 1 (NO ACTION)

No changes in present management are proposed under this alternative. Actions currently being taken will continue to be implemented. This alternative proposes to:

1) Protect known cultural resource sites;
2) Suppress all wildfires;
3) Allow firewood gathering;
4) Continue mineral exploration;
5) Continue cattle grazing;
6) Manage Cave and Lily Lakes campgrounds at current capacity;
7) Allow OHV use;
8) Maintain existing Forest roads;
9) Continue timber resource inventories; and
10) Monitor threatened and endangered wildlife species.

This alternative serves as baseline for comparison among alternatives.

ALTERNATIVE 2

Alternative 2 was designed to address the issues concerned with recreation opportunities and roadless areas. To enhance recreation opportunities and roadless character within the planning area. Alternative 2 proposes to:

1) Acquire land in Section 36 for a new trail route, if possible;
2) Recommend protection of the recreation facilities with additional acres of mineral withdrawal and administrative designation;
3) Increase the capacity of the Cave Lake facility;
4) Construct a new campground;
5) Construct new trails;
6) Develop a Cultural Resources interpretive site;
7) Close 2.4 miles of the National Recreation Trail to OHV use to enhance other uses of this trail;

8) Retain all acres within roadless areas to meet semi-primitive non-motorized (SPNM) recreation objectives; and
9) Reconstruct County Road 2 for improved recreation access and for use as an arterial haul route.

For integrated resource management, Alternative 2 proposes to:

1) Stabilize the banks of the northeast tributary to Cave Lake;
2) Manage the Lily Lake facility as a day-use area;
3) Construct or reconstruct 6.8 miles of roads and close 7.0 miles of roads;
4) Harvest 2177 MBF of timber using overstory removal and shelterwood methods;
5) Implement reforestation, precommercial thinning, broadcast burning, manual vegetation control, and animal control treatments after harvest;
6) Impose seasonal activity restrictions for the protection of two goshawk territories and a prairie falcon eyrie;
7) Manage approximately 1000 acres of lodgepole pine for marten habitat; and
8) Burn 300 acres to improve mule deer habitat.

In addition to these proposals, Alternative 2 continues all current management practices (see **ALTERNATIVE 1**), with the exception of changes in OHV use, increases in capacity at the Cave Lake facility, and changes to day-use only at the Lily Lake facility.

ALTERNATIVE 3

Alternative 3 was designed to address the issue concerned with the biodiversity and viability of wildlife and fish species. To maintain or enhance wildlife and fish habitats, Alternative 3 proposes to:

1) Stabilize the banks of the northeast tributary to Cave Lake;
2) Acquire private land along Pine Creek to facilitate redband trout management, if possible;
3) Develop an old growth interpretive site to inform the public;
4) Close 8.7 miles of roads to reduce wildlife disturbance;
5) Harvest 6777 MBF of timber using clearcutting, overstory removal, shelterwood, and commercial thinning methods to improve habitat capability for mule deer and blue grouse;
6) Impose seasonal activity restrictions for the protection of two goshawk territories and a prairie falcon eyrie;
7) Manage approximately 1000 acres of lodgepole pine for marten habitat; and
8) Burn 300 acres to improve mule deer habitat;

For integrated resource management, Alternative 3 proposes to:

1) Acquire land in Section 36 for a new trail route, if possible;
2) Recommend protection of the recreation facilities with additional acres of mineral withdrawal and administrative designation;
3) Increase the capacity of the Cave Lake facility ;
4) Manage the Lily Lake facility as a day-use area;
5) Construct a new campground;
6) Construct new trails;
7) Develop a Cultural Resources interpretive site;

8) Close 1.5 miles of the National Recreation Trail to OHV use;
9) Retain nearly all of the acres within roadless areas to meet SPNM recreation objectives;
10) Construct or reconstruct 6.9 miles of roads for timber access; and
11) Implement reforestation, precommercial thinning, and animal control treatments after harvest.

In addition to these proposals, Alternative 3 continues all current management practices (see **ALTERNATIVE 1**), with the exception of changes in OHV use, increases in capacity at the Cave Lake facility, and changes to day-use only at the Lily Lake facility.

ALTERNATIVE 4

Alternative 4 was designed to address the issue concerned with impacts to soil and water resources. To eliminate all risk of negatively impacting soil and water resources, or to enhance the quality of these resources, Alternative 4 proposes to:

1) Stabilize the banks of the northeast tributary to Cave Lake;
2) Impose locality restrictions on firewood cutting;
3) Acquire private lands in Section 34 for control over sensitive and unstable lands in this area, if possible;
4) Require recontouring, grass seeding, and/or tree planting in areas disturbed by mineral exploration;
5) Prohibit livestock grazing in sensitive areas;
6) Manage Lily Lake as a dispersed recreation area;
7) Close 2.4 miles of the National Recreation Trail to OHV use; and
8) Reconstruct 5.6 miles of roads and obliterate 8.4 miles of roads.

For integrated resource management, Alternative 4 proposes to:

1) Acquire lands in Section 36 for a new trail route, if possible;
2) Recommend protection of the recreation facilities with additional acres of mineral withdrawal and administrative designation;
3) Construct a new campground;
4) Construct trails;
5) Retain all acres within the roadless areas to meet SPNM recreation objectives;
6) Construct 1.3 miles of new roads for timber harvest access;
7) Harvest 3492 MBF of timber using clearcutting, overstory removal, and shelterwood methods;
8) Implement reforestation, precommercial thinning, broadcast burning, deep tilling, manual vegetation control, and animal control activities following timber harvest;
9) Impose seasonal activity restrictions for the protection of two goshawk territories and a prairie falcon eyrie; and
10) Manage approximately 1000 acres of lodgepole pine for marten habitat.

In addition to these proposals, Alternative 4 continues all current management practices (see **ALTERNATIVE 1**), with the exception of changes in firewood gathering, livestock grazing, OHV use, and use of the Lily Lake facility.

ALTERNATIVE 5

Alternative 5 was designed to emphasize economic and managerial efficiency in resource management. To address this theme, Alternative 5 proposes to:

1) Manage for firewood in a lodgepole pine area;
2) Stabilize the bank of the northeast tributary to Cave Lake;
3) Acquire land in Section 36 for a new trail route, if possible;
4) Recommend protection of the recreation facilities with additional acres of mineral withdrawal and administrative designation;
5) Increase the capacity of the Cave Lake facility;
6) Construct a new campground;
7) Construct new trails;
8) Develop a Cultural Resources interpretive site;
9) Retain two-thirds of the acres within roadless areas to meet SPNM recreation objectives;
10) Manage the Lily Lake facility as a day-use area;
11) Construct or reconstruct 4.1 miles of roads and close 1.4 miles of roads;
12) Harvest 8166 MBF of timber using clearcutting, overstory removal, and shelterwood methods;
13) Implement reforestation, precommercial thinning, broadcast burning, herbicide spraying, and animal control treatments following timber harvest;
14) Restock 3 acres of non-stocked land;
15) Impose seasonal activity restrictions for the protection of one goshawk territory and a prairie falcon eyrie; and
16) Burn 300 acres to improve mule deer habitat.

In addition to these proposals, Alternative 5 continues all current management practices (see ALTERNATIVE 1), with the exception of increases in capacity at the Cave Lake facility and changes to day-use only at the Lily Lake facility.

ALTERNATIVE 6

Alternative 6 addresses the issue concerned with the effect of timber harvest on long-term sustained-yield and local community stability. To manage all lands suitable for timber production at their highest levels of timber production, Alternative 6 proposes to:

1) Construct 8.5 miles and reconstruct 3.4 miles for economy of log haul, which includes construction of a new arterial road extension from Poison Lake Road to Buck Creek Road, through the Mt. Vida roadless area, for log haul and for additional recreation access;
2) Harvest 13,929 MBF of timber using clearcutting, overstory removal, shelterwood, group selection, and commercial thinning methods;
3) Implement reforestation, precommercial thinning, broadcast burning, herbicide spraying, manual vegetation control, and animal control treatments following timber harvest; and
4) Restock 3 acres of non-stocked lands.

For integrated resource management, Alternative 6 proposes to:

1) Manage for firewood in a lodgepole pine area;
2) Stabilize the bank of the northeast tributary to Cave Lake;
3) Acquire land in Section 36 for a new trail route, if possible;
4) Recommend protection of the recreation facilities with additional acres of mineral withdrawal and administrative designation;

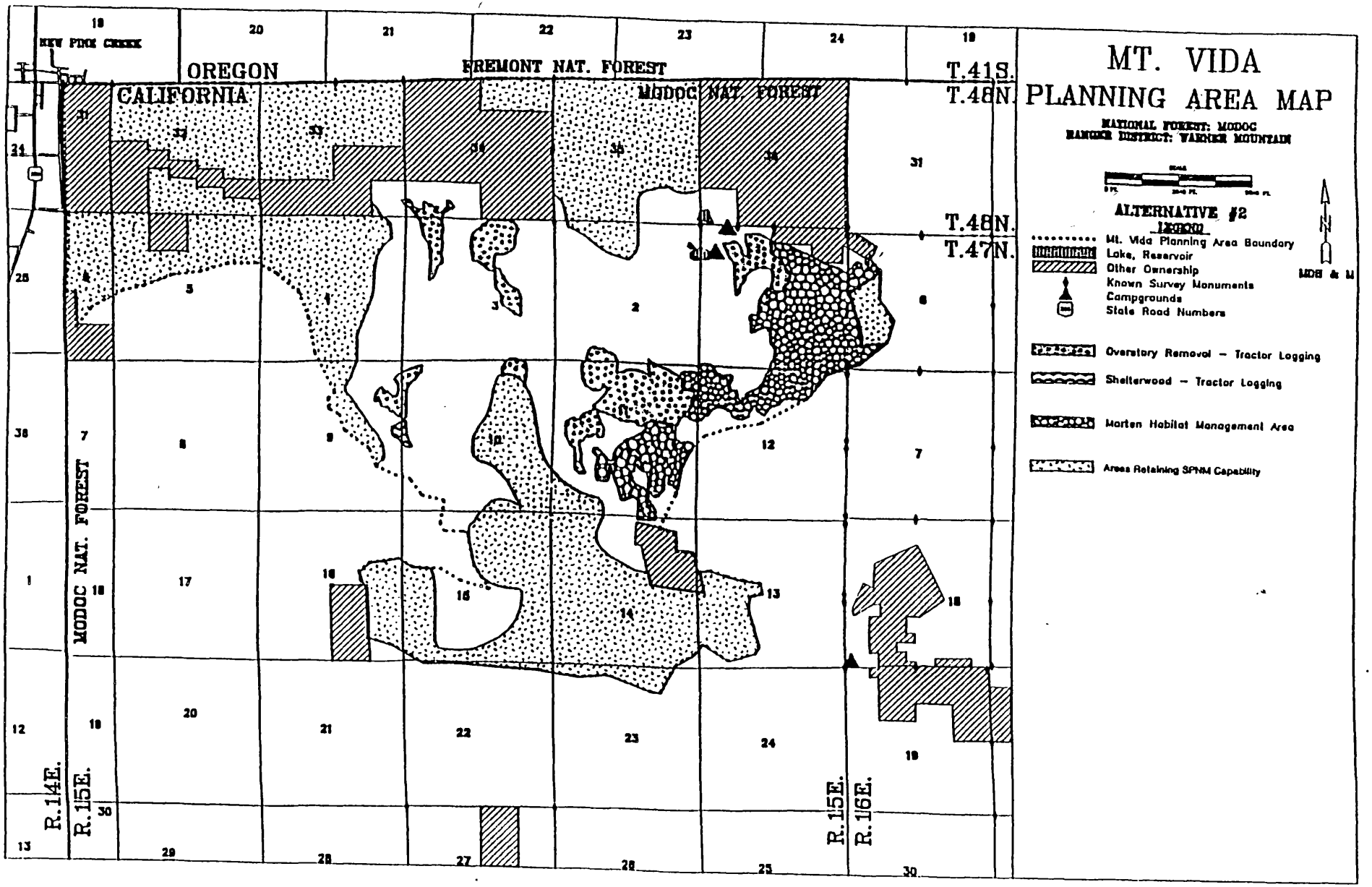
5) Increase the capacity of the Cave Lake facility;
6) Manage the Lily Lake facility as a day-use area;
7) Construct a new campground;
8) Construct new trails;
9) Develop a Cultural Resources interpretive site;
10) Close 2.4 miles of the National Recreation Trail to OHV use;
11) Retain one-fourth of the acres within roadless areas to meet SPNM recreation objectives;
11) Close 4.0 miles of Forest roads;
13) Impose seasonal activity restrictions for the protection of one goshawk territory and a prairie falcon eyrie; and
14) Burn 300 acres to improve mule deer habitat.

In addition to these proposals, Alternative 6 continues all current management practices (see **ALTERNATIVE 1**), with the exception of changes in OHV use, increases in capacity at the Cave Lake facility, and changes to day-use only at the Lily Lake facility.

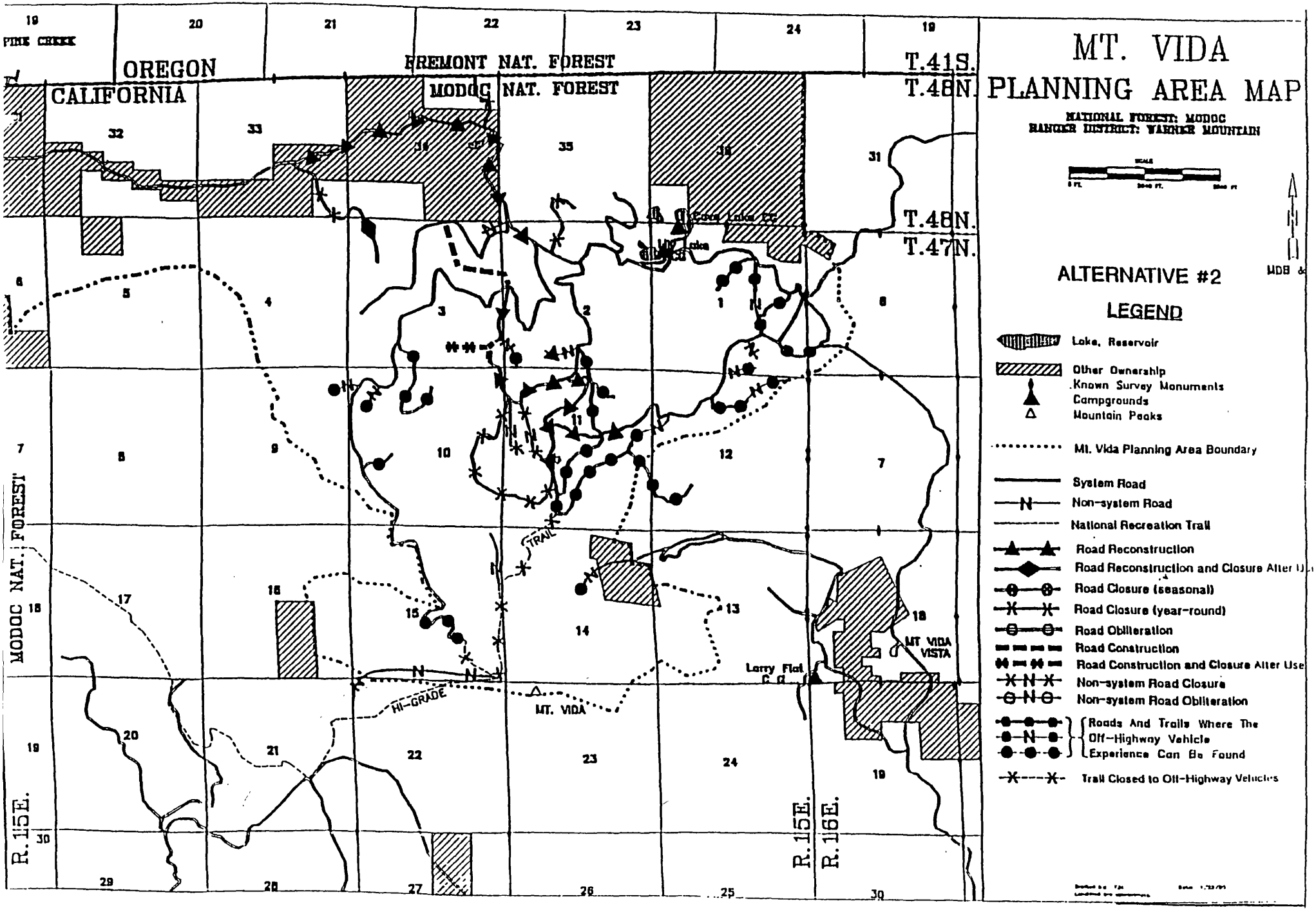
ALTERNATIVE 7 (THE PREFERRED ALTERNATIVE)
Alternative 7 was developed in response to the public comments received on the DEIS. To address both the public concern for resource management and the purpose and need for resource management in the Mt. Vida area, Alternative 7 proposes to:

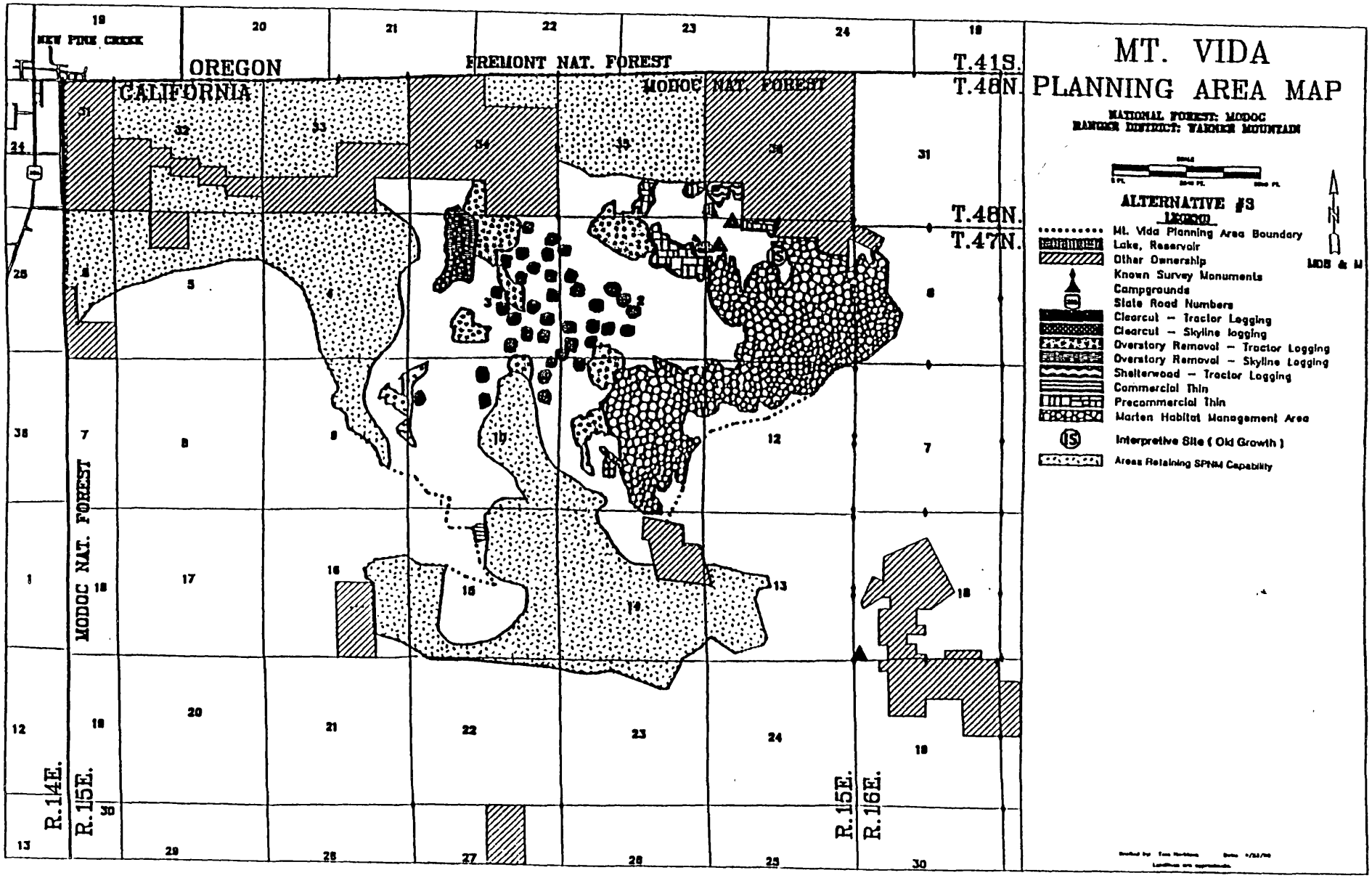
1) Stabilize the bank of the northeast tributary to Cave Lake;
2) Be receptive to proposals for land exchange in Sections 34, 36, and adjacent to Pine Creek for trail construction and to facilitate stream and redband trout management;
3) Recommend protection of the recreation facilities with additional acres of mineral withdrawal and administrative designation;
4) Develop a livestock water source and fence two riparian areas to prevent any further degradation of riparian areas;
5) Increase the capacity of the Cave Lake facility;
6) Construct a new campground;
7) Manage the Lily Lake facility as a day-use area;
8) Construct new trails;
9) Develop an Old Growth interpretive site and a Cultural Resources interpretive site;
10) Retain most of the acres within roadless areas to meet SPNM recreation objectives;
11) Construct or reconstruct 9.5 miles of roads and close or obliterate 9.1 miles of roads;
12) Construct a new arterial road extension from Poison Lake Road to Buck Creek Road, through the Mt. Vida roadless area, for log haul and for additional recreation access;
13) Harvest 7800 MBF of timber using clearcutting, overstory removal, group selection, and shelterwood methods;
14) Implement reforestation, precommercial thinning, broadcast burning, manual vegetation control, and animal control treatments following timber harvest;
15) Manage approximately 850 acres of lodgepole pine for marten habitat;
16) Impose seasonal activity restrictions for the protection of two goshawk territories and a prairie falcon eyrie; and
17) Burn 300 acres to improve mule deer habitat.

In addition to these proposals, Alternative 7 continues all current management practices (see **ALTERNATIVE 1**), with the exception of increases in capacity at the Cave Lake facility and changes to day-use only at the Lily Lake facility.

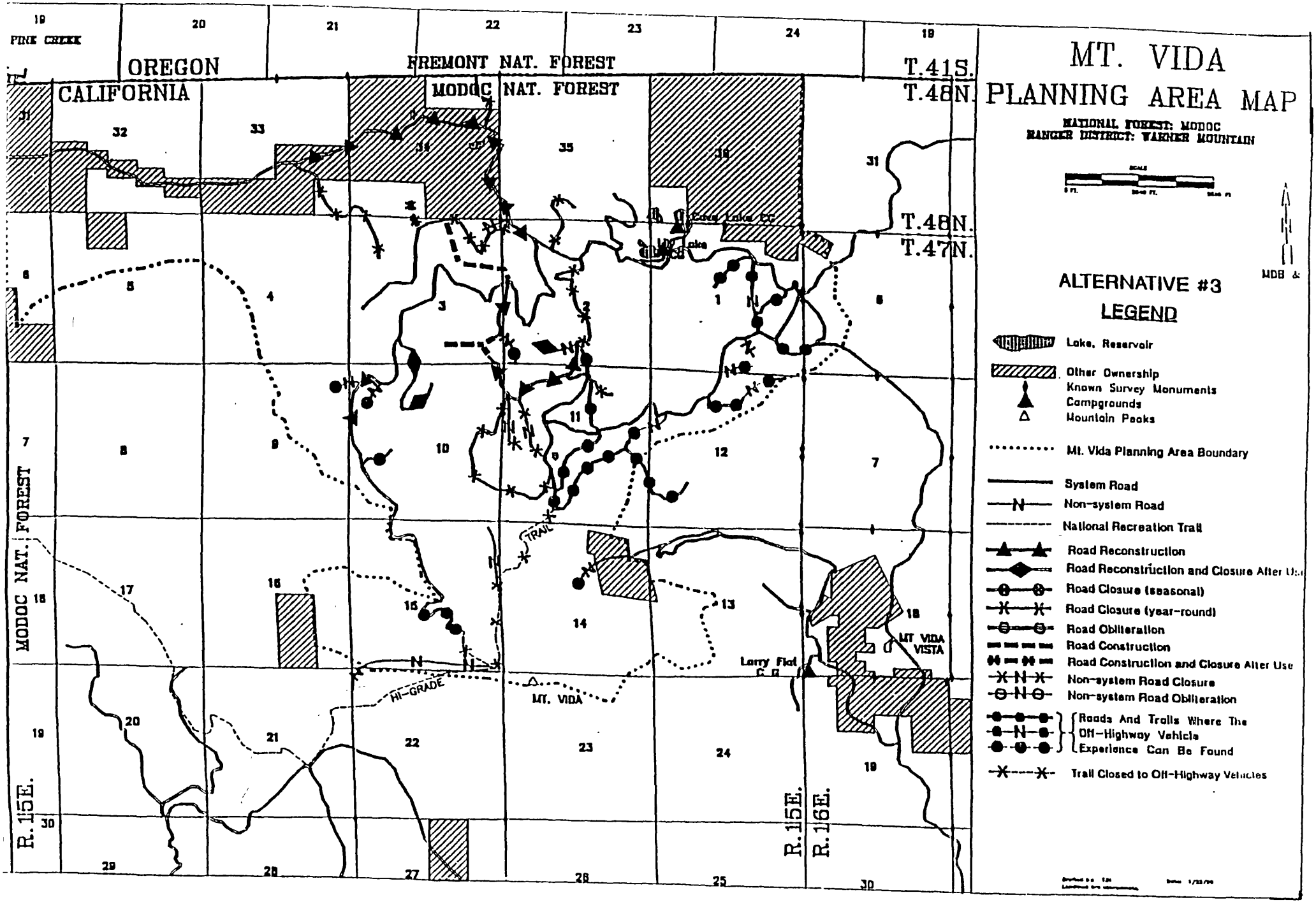

MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #2
Mt. Vida Planning Area Boundary
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
State Road Numbers
Overstory Removal – Tractor Logging
Shelterwood – Tractor Logging
Marten Habitat Management Area
Areas Retaining SPNM Capability
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
MODOC NAT. FOREST
T.41S.
T.48N.
T.48N.
T.47N.
R.14E.
R.15E.
R.15E.
R.16E.

APPENDIX B


MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #2
LEGEND
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
Mountain Peaks
Mt. Vida Planning Area Boundary
System Road
Non-system Road
National Recreation Trail
Road Reconstruction
Road Reconstruction and Closure After Use
Road Closure (seasonal)
Road Closure (year-round)
Road Obliteration
Road Construction
Road Construction and Closure After Use
Non-system Road Closure
Non-system Road Obliteration
Roads And Trails Where The Off-Highway Vehicle Experience Can Be Found
Trail Closed to Off-Highway Vehicles
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
T.41S.
T.48N.
T.47N.
R.15E.
R.16E.
MT. VIDA
MT VIDA VISTA
HI-GRADE
TRAIL
Larry Flat
Cave Lake
Lake


MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #3
LEGEND
Mt. Vida Planning Area Boundary
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
State Road Numbers
Clearcut – Tractor Logging
Clearcut – Skyline logging
Overstory Removal – Tractor Logging
Overstory Removal – Skyline Logging
Shelterwood – Tractor Logging
Commercial Thin
Precommercial Thin
Marten Habitat Management Area
Interpretive Site (Old Growth)
Areas Retaining SPNM Capability
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
MODOC NAT. FOREST
NEW PINE CREEK
T.41S.
T.48N.
T.47N.
R.14E.
R.15E.
R.15E.
R.16E.

Appendix B – 3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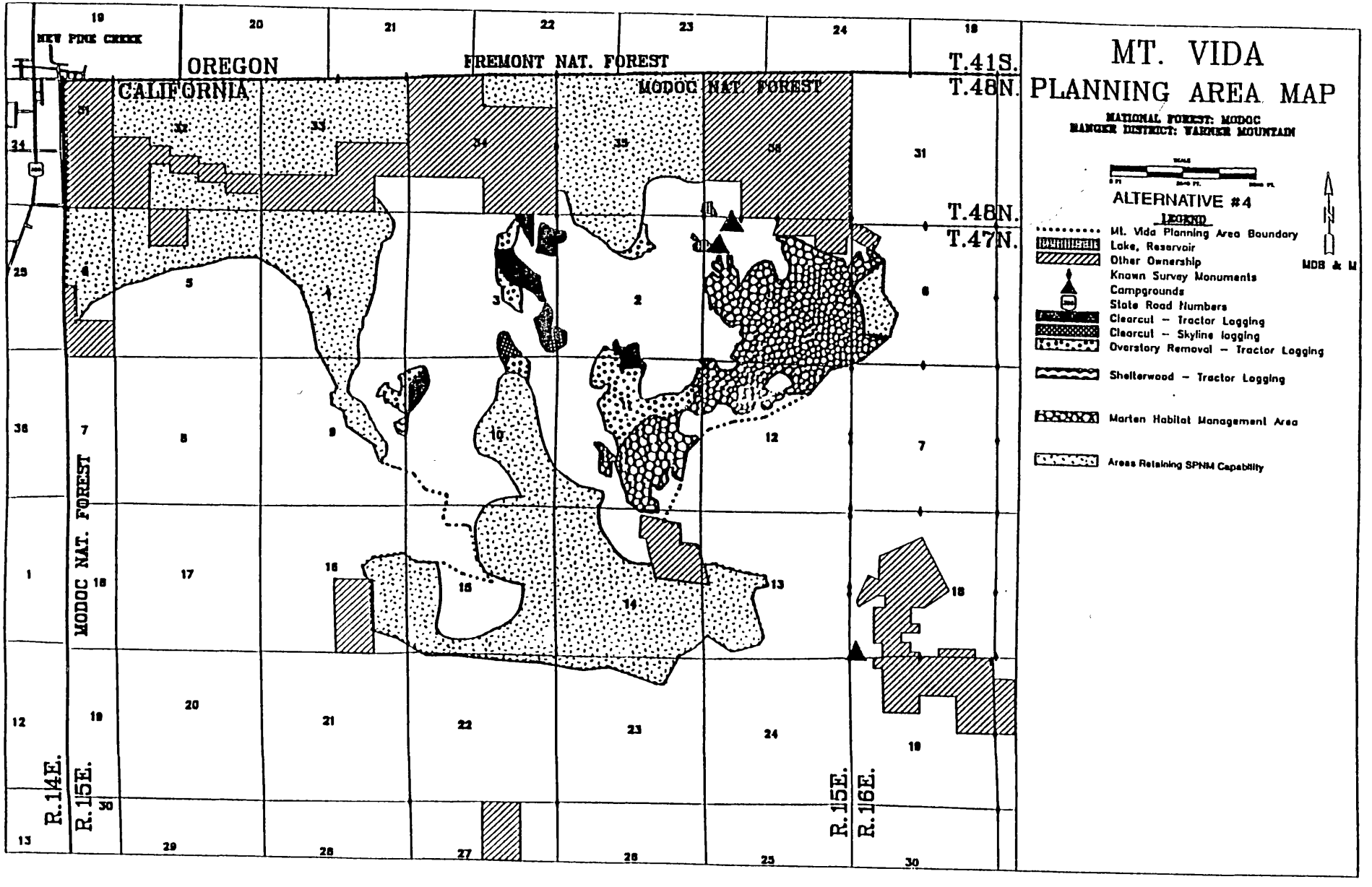
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #3
LEGEND
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
Mountain Peaks
Mt. Vida Planning Area Boundary
System Road
Non-system Road
National Recreation Trail
Road Reconstruction
Road Reconstruction and Closure After Use
Road Closure (seasonal)
Road Closure (year-round)
Road Obliteration
Road Construction
Road Construction and Closure After Use
Non-system Road Closure
Non-system Road Obliteration
Roads And Trails Where The Off-Highway Vehicle Experience Can Be Found
Trail Closed to Off-Highway Vehicles
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
T.41S.
T.48N.
T.47N.
R.15E.
R.16E.
MT. VIDA
MT. VIDA VISTA
HI-GRADE TRAIL
Larry Flat
PINE CREEK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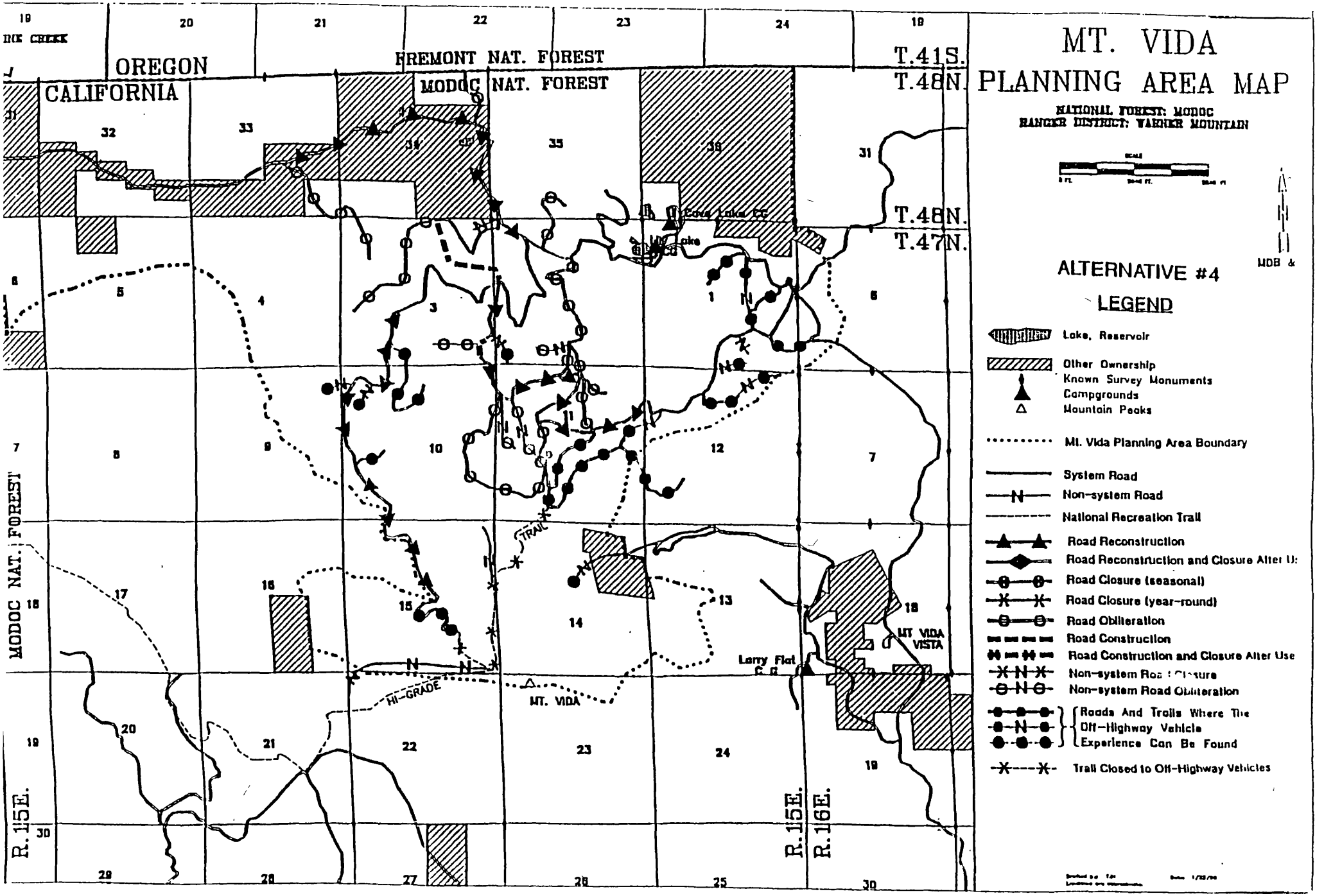
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #4
LEGEND
Mt. Vida Planning Area Boundary
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
State Road Numbers
Clearcut – Tractor Logging
Clearcut – Skyline logging
Overstory Removal – Tractor Logging
Shelterwood – Tractor Logging
Marten Habitat Management Area
Areas Retaining SPNM Capability
MDB & M
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
MODOC NAT. FOREST
NEW PINE CREEK
T.41S.
T.48N.
T.48N.
T.47N.
R.14E.
R.15E.
R.15E.
R.16E.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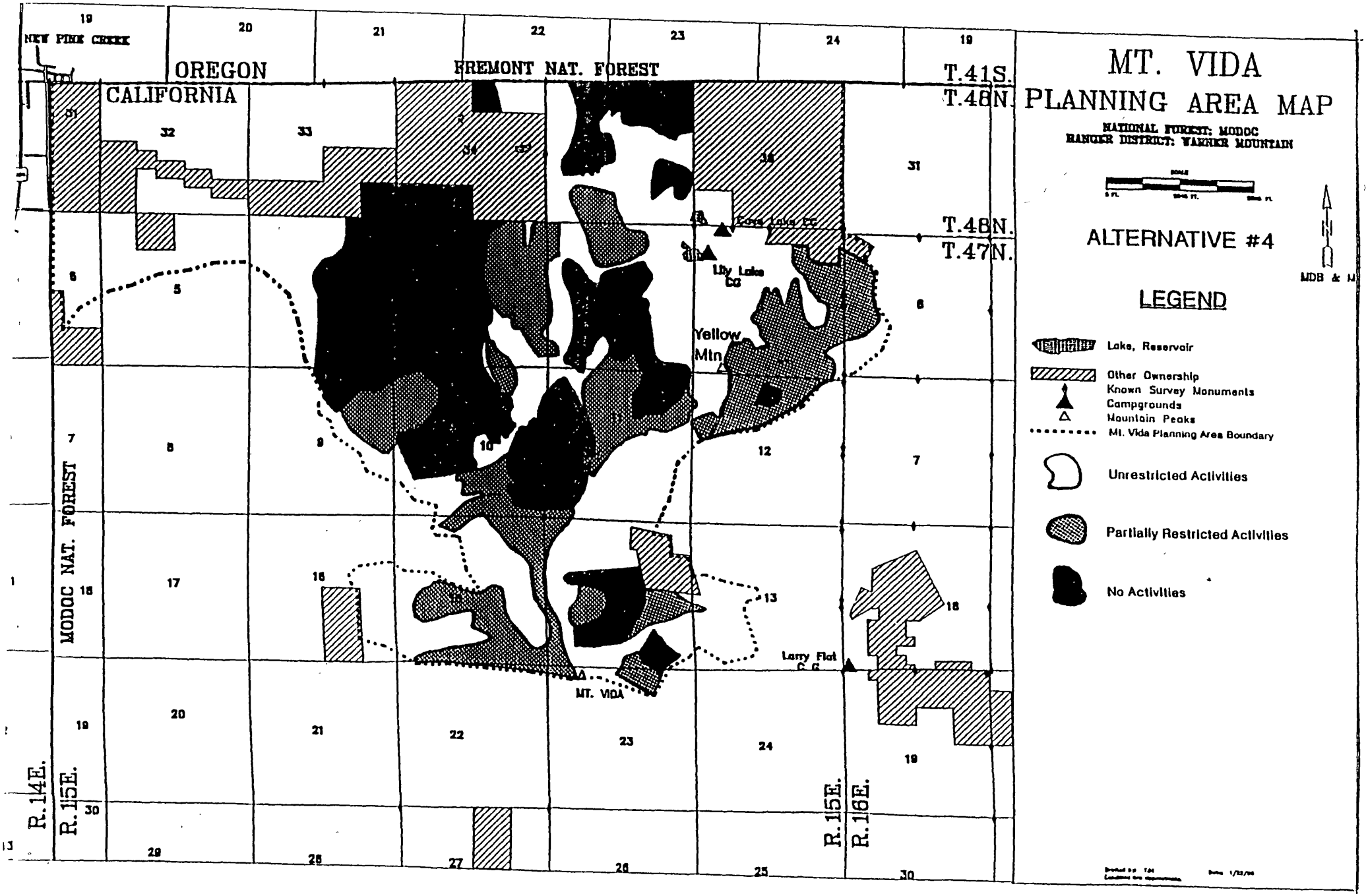
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #4
LEGEND
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
Mountain Peaks
Mt. Vida Planning Area Boundary
System Road
Non-system Road
National Recreation Trail
Road Reconstruction
Road Reconstruction and Closure After Use
Road Closure (seasonal)
Road Closure (year-round)
Road Obliteration
Road Construction
Road Construction and Closure After Use
Non-system Road Closure
Non-system Road Obliteration
Roads And Trails Where The Off-Highway Vehicle Experience Can Be Found
Trail Closed to Off-Highway Vehicles
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
T.41S.
T.48N.
T.47N.
R.15E.
R.16E.
MT. VIDA
MT VIDA VISTA
HI-GRADE
TRAIL
Larry Flat
Fava Lake CG
MDB &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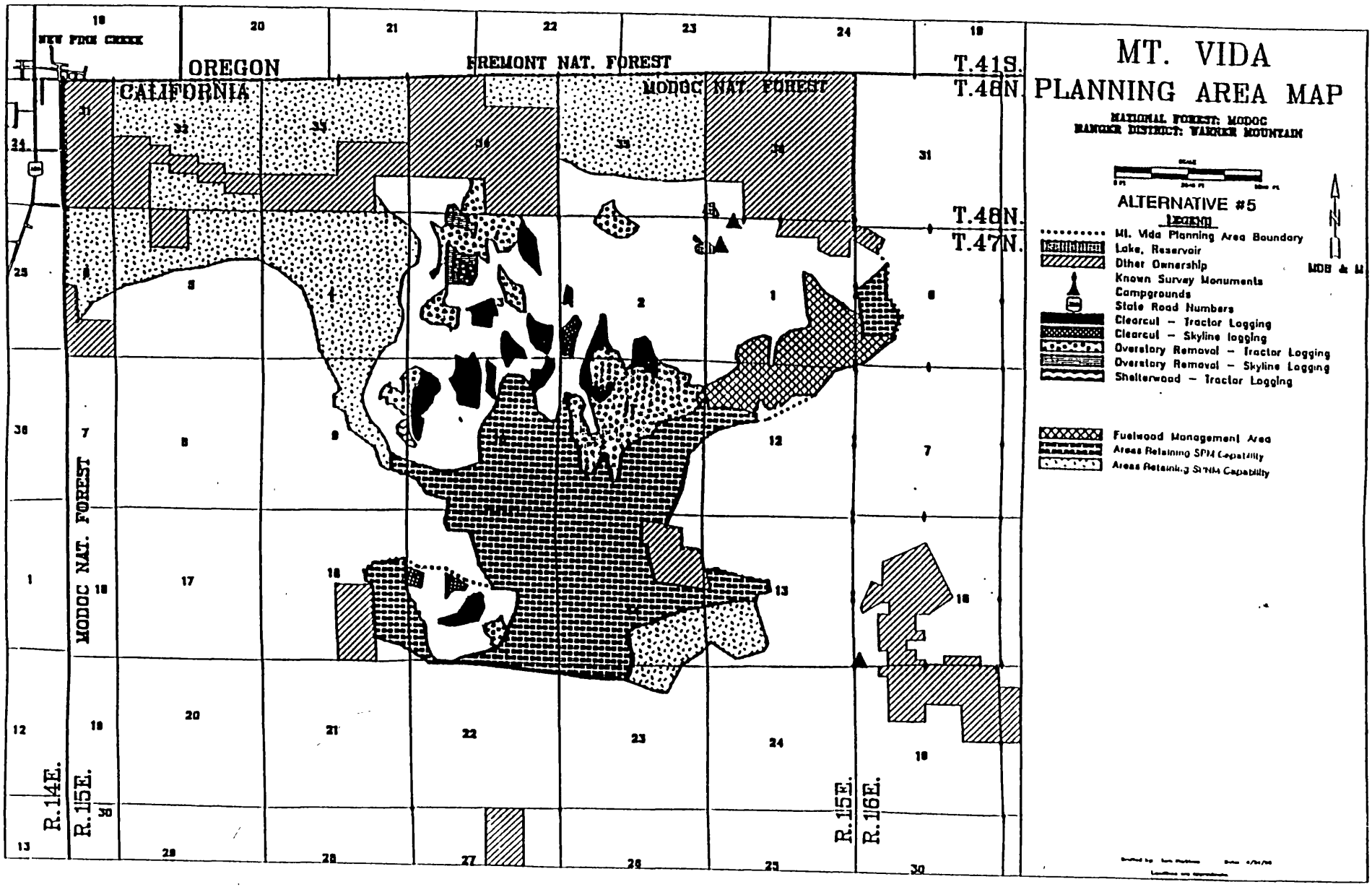
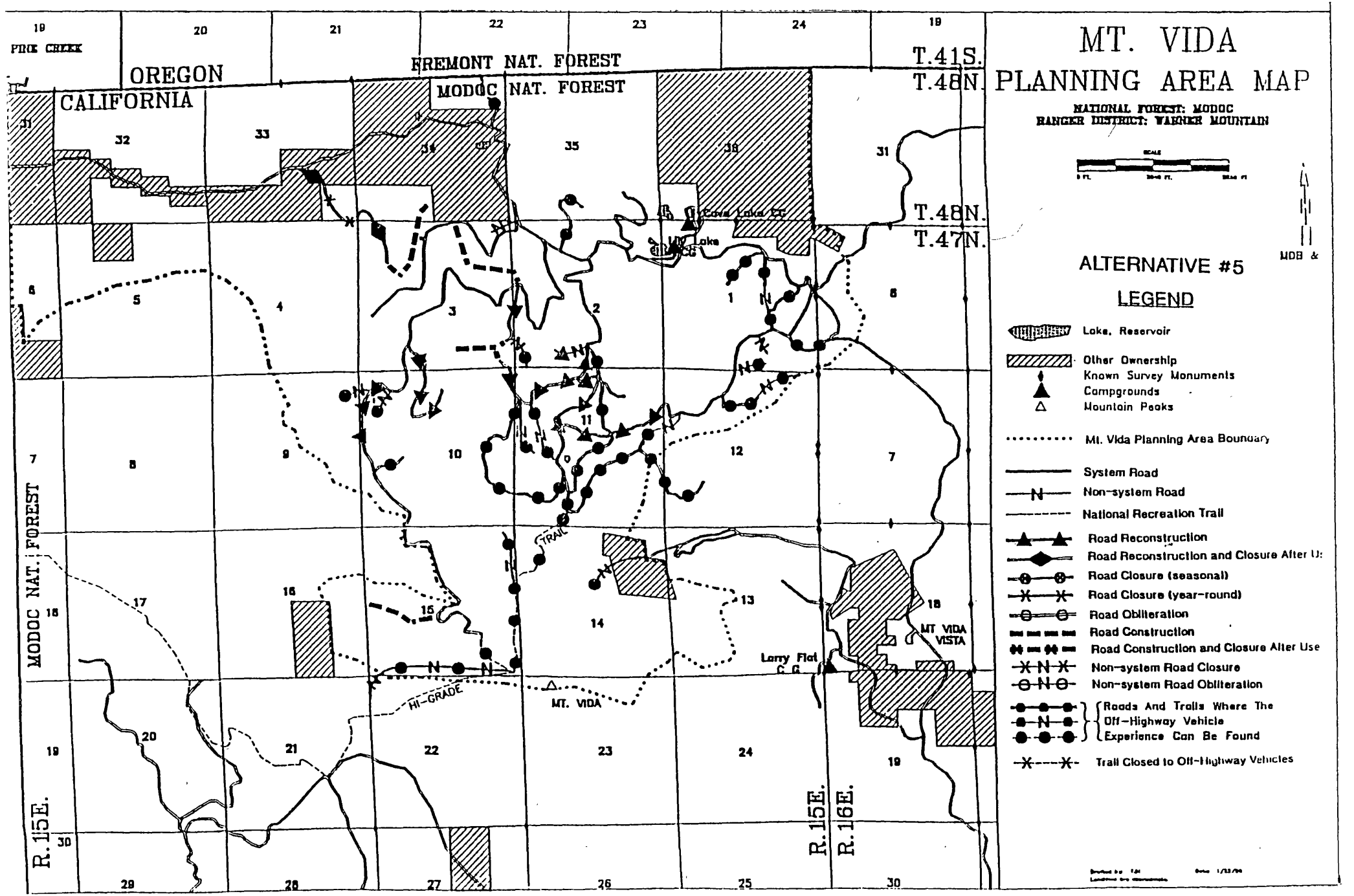
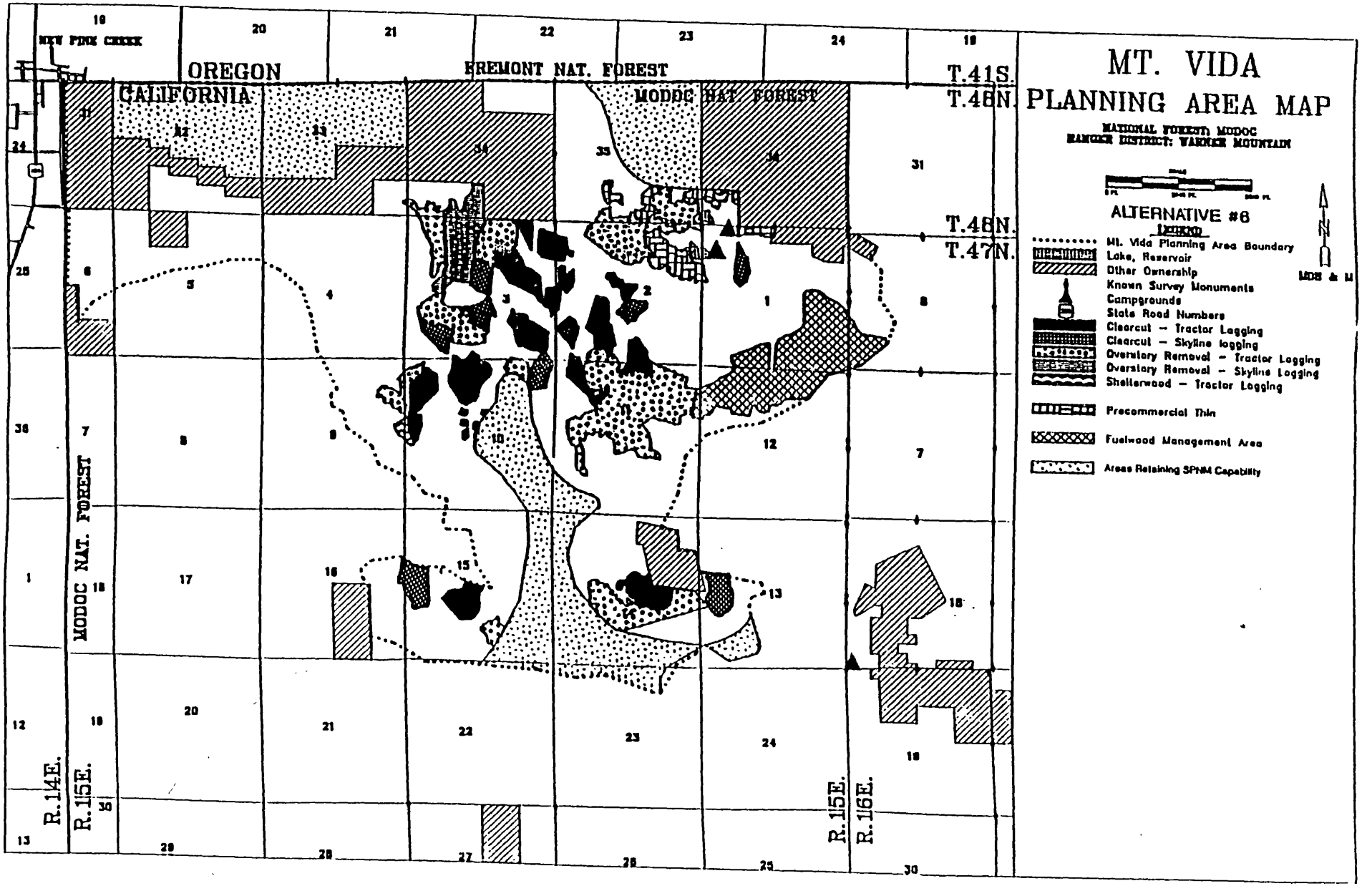
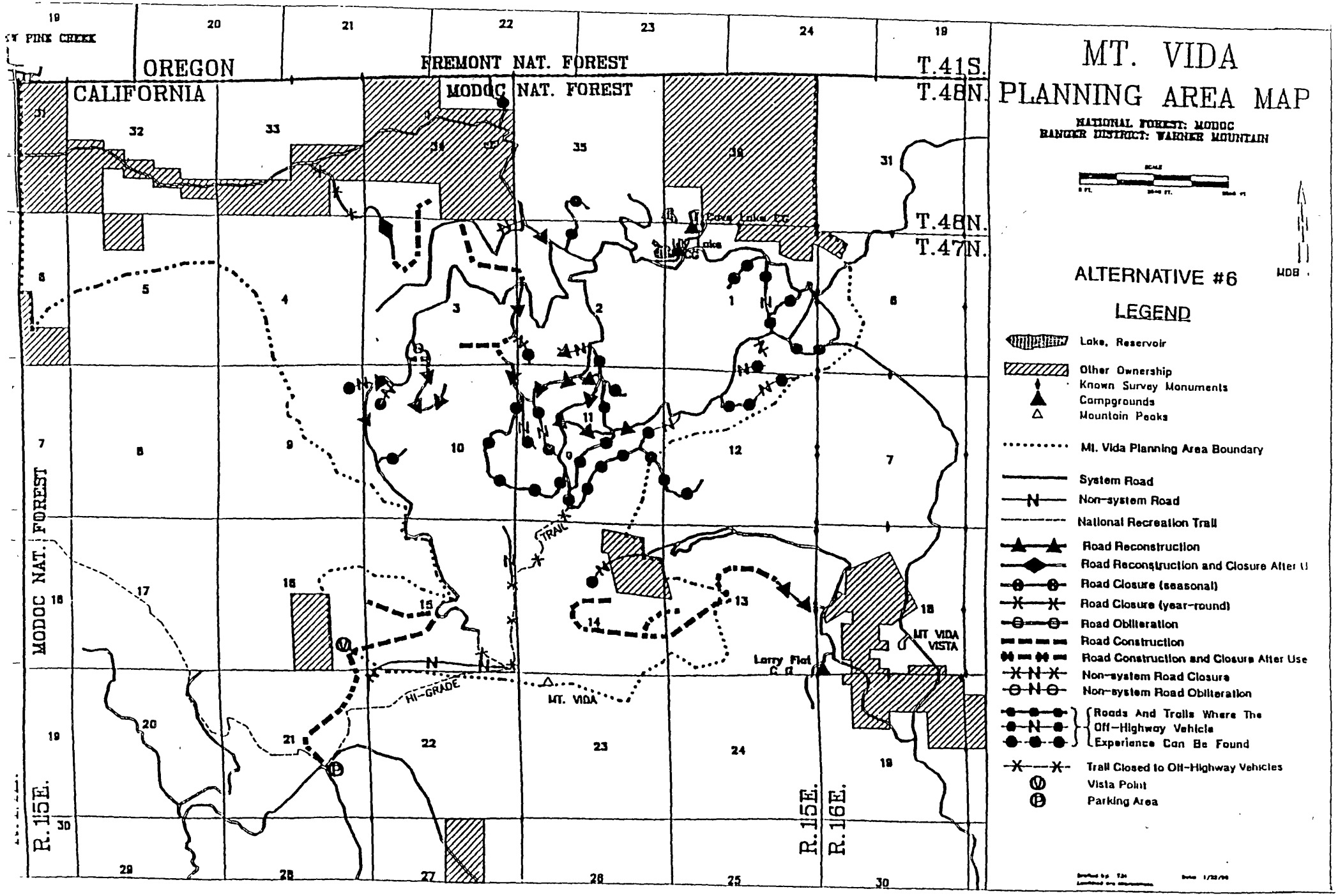
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #4
LEGEND
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
Mountain Peaks
Mt. Vida Planning Area Boundary
Unrestricted Activities
Partially Restricted Activities
No Activities
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
NEW PINE CREEK
Fove Lake Cg
Lily Lake Cg
Yellow Mtn
MT. VIDA
Larry Flat C G
T.41S.
T.48N.
T.47N.
R.14E.
R.15E.
R.15E.
R.16E.


MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #5
LEGEND
Mt. Vida Planning Area Boundary
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
State Road Numbers
Clearcut – Tractor Logging
Clearcut – Skyline logging
Overstory Removal – Tractor Logging
Overstory Removal – Skyline Logging
Shelterwood – Tractor Logging
Fuelwood Management Area
Areas Retaining SPM Capability
Areas Retaining SRNM Capability
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
MODOC NAT. FOREST
NEW PINE CREEK
T.41S.
T.48N.
T.48N.
T.47N.
R.14E.
R.15E.
R.15E.
R.16E.


MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #5
LEGEND
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
Mountain Peaks
Mt. Vida Planning Area Boundary
System Road
Non-system Road
National Recreation Trail
Road Reconstruction
Road Reconstruction and Closure After Use
Road Closure (seasonal)
Road Closure (year-round)
Road Obliteration
Road Construction
Road Construction and Closure After Use
Non-system Road Closure
Non-system Road Obliteration
Roads And Trails Where The Off-Highway Vehicle Experience Can Be Found
Trail Closed to Off-Highway Vehicles
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
MODOC NAT. FOREST
T.41S.
T.48N.
T.48N.
T.47N.
R.15E.
R.15E.
R.16E.
MT. VIDA
MT. VIDA VISTA
Larry Flat C.G.
Cove Lake CG
Lily Lake CG
HI-GRADE TRAIL
TRAIL


MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #6
LEGEND
Mt. Vida Planning Area Boundary
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
State Road Numbers
Clearcut – Tractor Logging
Clearcut – Skyline logging
Overstory Removal – Tractor Logging
Overstory Removal – Skyline Logging
Shelterwood – Tractor Logging
Precommercial Thin
Fuelwood Management Area
Areas Retaining SPNM Capability
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
MODOC NAT. FOREST
NEW PINE CREEK
T.41S.
T.46N.
T.46N.
T.47N.
R.14E.
R.15E.
R.15E.
R.16E.


MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #6
LEGEND
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
Mountain Peaks
Mt. Vida Planning Area Boundary
System Road
Non-system Road
National Recreation Trail
Road Reconstruction
Road Reconstruction and Closure After U
Road Closure (seasonal)
Road Closure (year-round)
Road Obliteration
Road Construction
Road Construction and Closure After Use
Non-system Road Closure
Non-system Road Obliteration
Roads And Trails Where The
Off-Highway Vehicle
Experience Can Be Found
Trail Closed to Off-Highway Vehicles
Vista Point
Parking Area
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
T.41S.
T.48N.
T.47N.
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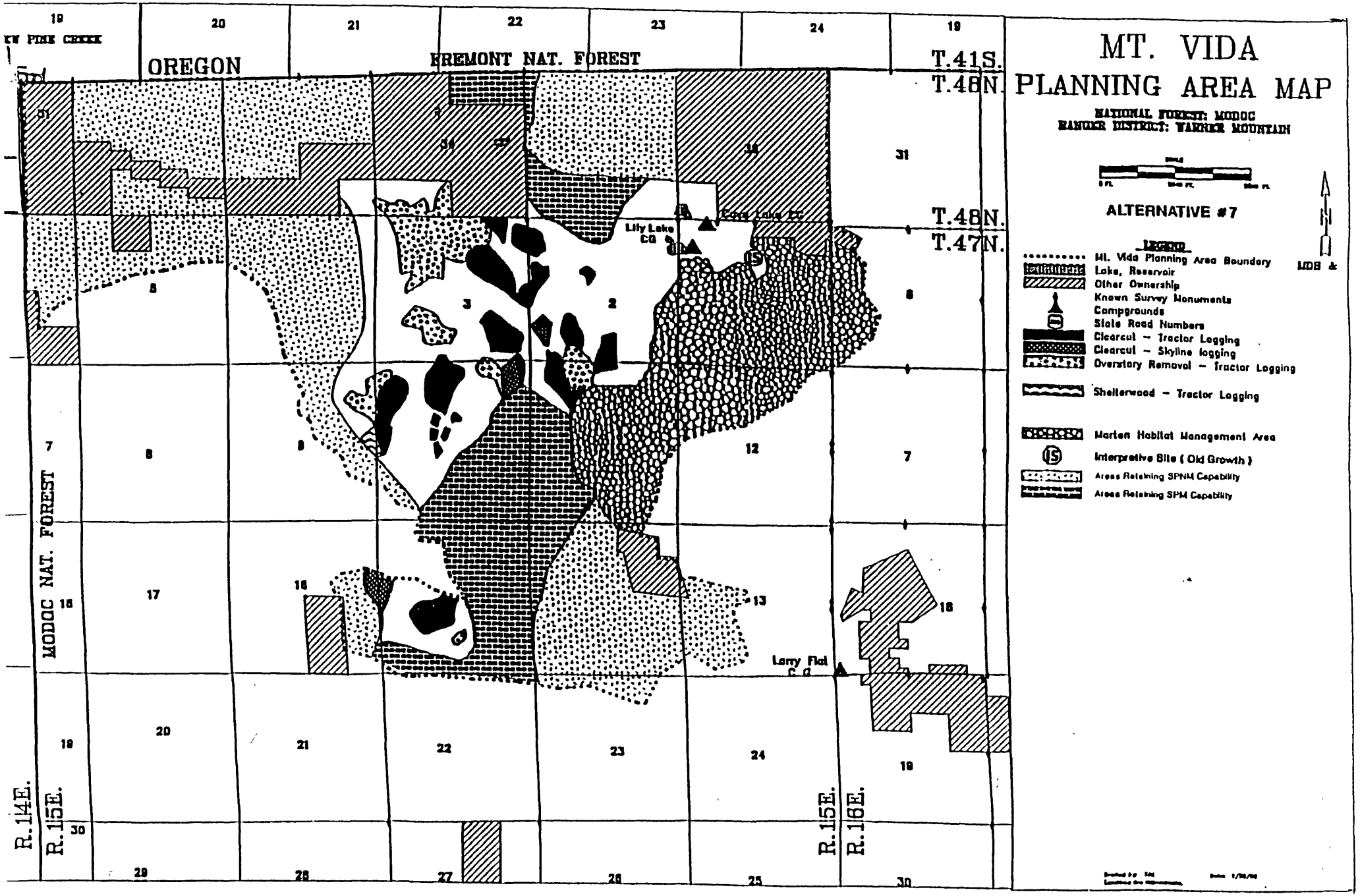
R.16E.
MT. VIDA
MT VIDA VISTA
Larry Flat
HI-GRADE
TRAIL
Cave Lake
Lily Lake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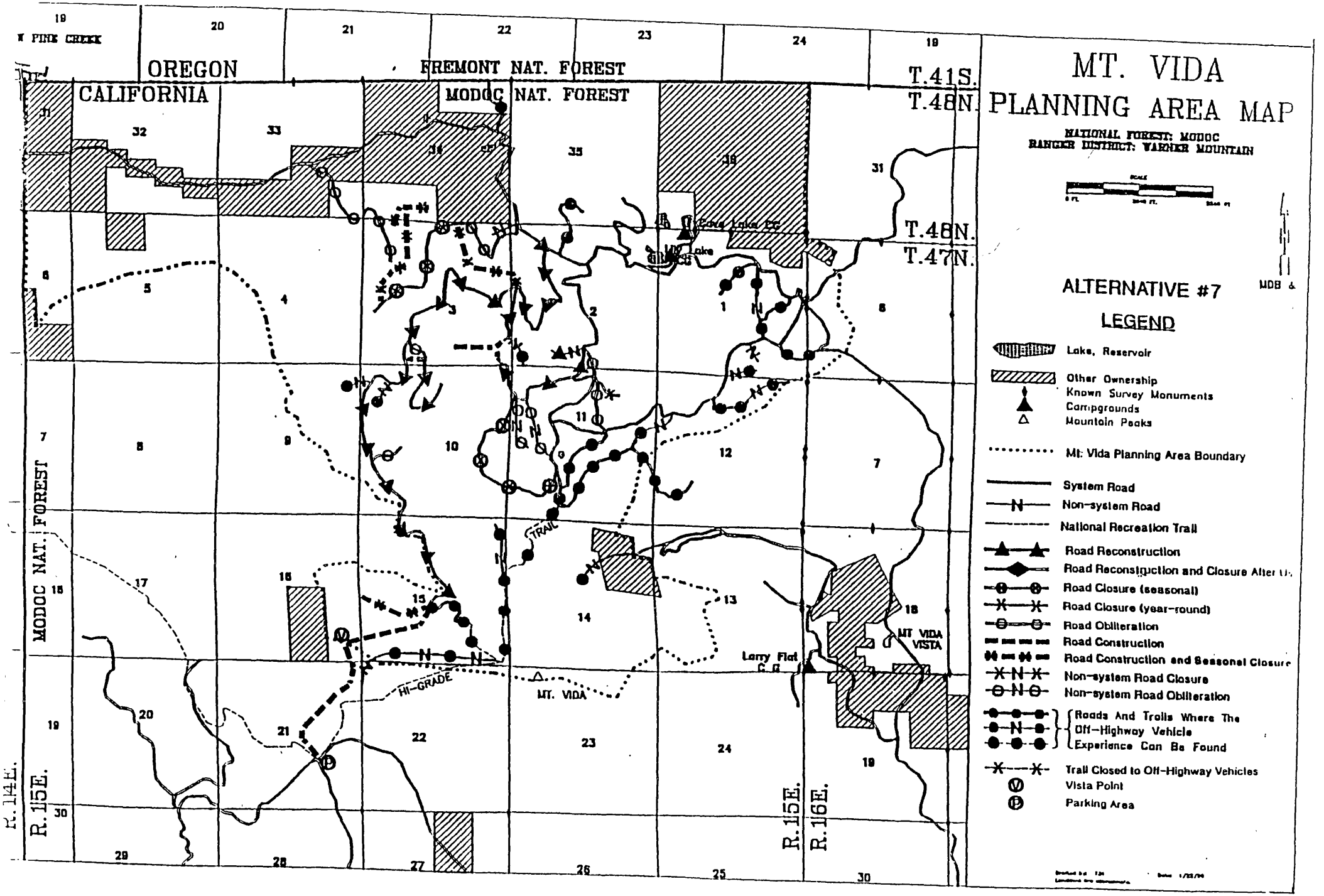
FREMONT NAT. FOREST
T.41S.
T.48N.
T.48N.
T.47N.
Lily Lake CG
Pond Lake FC
Larry Flat CG
MODOC NAT. FOREST
R.14E.
R.15E.
R.15E.
R.16E.
MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #7
Legend
Mt. Vida Planning Area Boundary
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
State Road Numbers
Clearcut – Tractor Logging
Clearcut – Skyline logging
Overstory Removal – Tractor Logging
Shelterwood – Tractor Logging
Marten Habitat Management Area
Interpretive Site (Old Growth)
Areas Retaining SPNM Capability
Areas Retaining SPM Capability
MDB &


MT. VIDA
PLANNING AREA MAP
NATIONAL FOREST: MODOC
RANGER DISTRICT: WARNER MOUNTAIN
ALTERNATIVE #7
LEGEND
Lake, Reservoir
Other Ownership
Known Survey Monuments
Campgrounds
Mountain Peaks
Mt. Vida Planning Area Boundary
System Road
Non-system Road
National Recreation Trail
Road Reconstruction
Road Reconstruction and Closure After Use
Road Closure (seasonal)
Road Closure (year-round)
Road Obliteration
Road Construction
Road Construction and Seasonal Closure
Non-system Road Closure
Non-system Road Obliteration
Roads And Trails Where The Off-Highway Vehicle Experience Can Be Found
Trail Closed to Off-Highway Vehicles
Vista Point
Parking Area
OREGON
CALIFORNIA
FREMONT NAT. FOREST
MODOC NAT. FOREST
MODOC NAT. FOREST
T.41S.
T.48N.
T.48N.
T.47N.
R.14E.
R.15E.
R.15E.
R.16E.
MT. VIDA
MT VIDA VISTA
Larry Flat
HI-GRADE
TRAIL
Lake
MDB &

APPENDIX C

KEY INDICATOR	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7
Volume Harvested (MBF)							
Total	0	2177	6777	3492	8166	13,929	7800
Even-aged Mgmt. Total	0	2177	6777	3492	8157	13,784	7664
– Clearcutting	0	0	3666	1767	4559	8391	5218
– Overstory Removal & PCT	0	1196	2696	1155	2600	4057	2298
– Overstory Removal & Plant	0	899	34	510	916	932	67
– Seed Step Shelterwood	0	82	342	60	82	342	81
– Commercial Thinning	0	0	39	0	0	62	0
– Precommercial Thinning	0	0	0	0	0	0	0
Uneven-aged Mgmt. Total	0	0	0	0	0	136	136
– Single Tree Selection	0	0	0	0	0	0	0
– Group Selection	0	0	0	0	0	136	136
Special Management Total	0	0	0	0	9	9	0
– Recreation	0	0	0	0	0	0	0
– Riparian	0	0	0	0	9	9	0
Acres Treated							
Total	0	281	628	310	692	1175	571
Even-aged Mgmt. Total	0	260	607	310	663	1134	540
– Clearcutting	0	0	198	110	262	430	274
– Overstory Removal & PCT	0	162	312	140	294	499	243
– (Precommercial Thinning)	0	(35)	(65)	(12)	(28)	(78)	(73)
– Overstory Removal & Plant	0	91	8	55	97	98	14
– (Planting)	0	(20)	(3)	(21)	(23)	(23)	(5)
– Seed Step Shelterwood	0	7	14	5	7	13	7
– Commercial Thinning	0	0	6	0	0	13	0
– Precommercial Thinning	0	0	69	0	0	78	2
– Restock nonstocked land	0	0	0	0	3	3	0
Uneven-aged Mgmt. Total	0	0	0	0	0	10	10
– Single Tree Selection	0	0	0	0	0	0	0
– Group Selection	0	0	0	0	0	10	10
Special Management Total	0	21	21	0	29	31	21
– Recreation	0	21	21	0	21	18	21
– Riparian	0	0	0	0	8	13	0
Ac's Harv by Logging Sys							
Total	0	260	538	310	668	1076	548
Skyline	0	0	140	20	85	255	51
Tractor	0	260	398	290	583	821	497
Vol Harvested by Logging System (MBF)							
Total Vol Harvested	0	2177	6777	3492	8166	13,929	7800
Skyline	0	0	2152	336	1615	4338	1400
Tractor	0	2177	4625	3156	6551	9591	6400
Acres of Reforestation							
Total	0	27	215	136	295	479	296
Even-aged Mgmt. Total	0	27	215	136	295	469	286
– Clearcut	0	0	198	110	262	430	274
– Seed Step Shelterwood	0	7	14	5	7	13	7
– Overstory Rem Openings	0	20	3	21	23	23	5
– Non-stocked Land	0	0	0	0	3	3	0
Uneven-aged Mgmt. Total	0	0	0	0	0	10	10
– Group Selection	0	0	0	0	0	10	10

KEY INDICATOR	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7
Acres of Site Preparation							
Total	0	27	0	136	295	479	296
Tractor Pile & Burn	0	27	0	0	102	179	132
Broadcast Burn	0	0	0	42	174	265	164
Herbicide/Burn	0	0	0	0	19	35	0
Tractor Pile, Burn, & Deep Till	0	0	0	94	0	0	0
Acres of Veg Control							
Total	0	27	0	136	295	479	296
Manual	0	27	0	136	0	13	296
Herbicide	0	0	0	0	295	466	0
Acres of Animal Control							
Total	0	27	70	136	295	479	296
Strychnine-Treated Bait	0	27	0	136	295	479	296
(Plastic Seedling Protectors)	0	(20)	(70)	(57)	(111)	(127)	(100)
Acres of Chemical Use							
Herbicide Total	0	0	0	0	295	466	0
-- (Site Preparation)	0	0	0	0	(19)	(35)	0
– Release	0	0	0	0	295	466	0
Pesticide Total	0	27	0	136	295	479	296
– Animal Control	0	27	0	136	295	479	296
No. of Interpretive Sites	0	1	2	0	1	1	2
Miles of Trail	0.9	10.6	10.6	8.2	8.4	6.5	8.4
Acres by ROS Class							
Roaded Natural	4899	3283	3303	3283	2814	5243	2883
Semi-Primitive Motorized	0	0	0	0	1580	0	1093
Semi-Primitive Non-Motorized	1958	3574	3554	3574	2463	1614	2881
Miles of New Road Const.	0.0	1.7	1.9	1.3	2.7	8.5	4.7
Total Miles of Roads Closed or Obliterated (all types)	0.0	7.0	8.7	8.4	1.4	4.0	9.1
Estimated Receipts ($)							
National Forest Fund	0	111,288	886,628	632,522	1,156,427	1,889,666	1,523,209
Modoc County Rds & Schools	0	27,822	221,657	158,130	289,107	472,416	380,802
Percent of Forested Acres Harvested	0.00	7.09	15.75	7.83	17.37	29.56	14.31
TS Deficits ($/MBF)	NA	-131.15	-95.39	-144.82	-164.29	-163.05	-191.72
Cost Recovery (Dollars)	NA	+77,000	+216,000	+160,000	+285,000	+462,000	+387,000
Jobs (Timber Harvest)	NA	24	73	38	86	150	84
PNV of Entire Alt. ($)	0	-624,000	-500,000	-439,000	-191,000	-161,000	-348,000
Benefit/Cost Ratio							
– Entire Alternative	1.0	0.19	0.59	0.54	0.83	0.91	0.78
– Timber Sales Only	1.0	2.10	1.42	1.44	1.43	1.42	1.45

KEY INDICATOR	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7
Equivalent Roaded Acres / Percent of Watershed							
Bidwell Creek (TOC = 8%, Acs = 15,000)							
– Year 0	unknown	+5/+0.03	+6/+0.04	-2/-0.01	+6/+0.04	+40/+0.3	+4/+0.03
– Year 10	unknown	+2/+0.02	+4/+0.03	-2/-0.01	+4/+0.03	+28/+0.2	+2/+0.02
– Year 20	unknown	+0/+0.00	+2/+0.01	-2/-0.01	+2/+0.01	+15/+0.1	+0/+0.00
Cottonwood Creek (TOC=5%, Acs = 3935)							
– Year 0	92/2.3	115/2.9	116/2.9	92/2.3	128/3.3	146/3.7	134/3.4
– Year 10	57/1.4	73/1.9	74/1.9	57/1.4	89/2.3	95/2.4	87/2.2
– Year 20	57/1.4	63/1.6	64/1.6	57/1.4	72/1.8	77/2.0	73/1.9
Pine Creek (TOC = 8%, Acs = 8160)							
– Year 0	296/3.6	362/4.4	424/5.2	348/4.3	483/5.9	580/7.1	463/5.7
– Year 10	229/2.8	270/3.3	317/3.9	262/3.2	357/4.4	423/5.2	338/4.1
– Year 20	229/2.8	249/3.0	280/3.4	242/3.0	301/3.7	339/4.2	280/3.4
Acres of Streamside Mgmt. Zones Impacted	0	0	0	0	8	13	0
Ac's of Meadow Impacted	0	0	2	0	0	0	2
Ac's of Lakes Impacted	0	0	0	0	0	0	0
Percent of Soil Compacted	2.4	2.8	3.5	2.8	5.1	6.7	5.0
Forested areas with Sensitive Soils							
Acres Harvested	0	11	360	0	208	406	119
Percent Harvested	0	0.4	13.6	0	7.8	15.3	4.5
Forested, Unstable areas							
Acres Harvested	0	0	32	0	15	87	0
Percent Harvested	0	0	9.5	0	4.5	25.8	0
Forest lands, slopes >40%							
Acres Harvested	0	122	176	41	266	475	119
Percent harvested	0	11.2	16.1	3.8	24.4	43.5	10.9
Fish Habitat Effects							
Miles of Habitat Degraded	0	0	0	0	2.5	0	0
Miles of Habitat Improved	0	0.3	0.3	0.3	0.3	0.3	0.3
RVDs (Maximum Acceptable Capacity)	9904	18,468	18,468	16,277	18,468	12,778	18,468
Acres by VQO							
Retention	3358	4848	3326	4828	3358	2978	4937
Partial Retention	2485	1160	2485	1140	2443	2033	823
Modification	929	849	1046	889	1056	1846	1097
Maximum Modification	85	0	0	0	0	0	0
OHV Experience - Miles Available	12.2	6.7	5.7	6.2	10.6	8.6	8.6

KEY INDICATOR	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7
Avg Daily No. of Vehicles on CR2 (Lower Section)							
Recreation Traffic	44	83	83	73	83	43	62
Timber Sale Traffic	0	25	25	25	25	25	0
No. of Timber Sale Haul Days	0	22	68	35	80	5	0
Disturbance within Released Roadless Areas							
Miles of Roads (All types)	2.9	0.0	0.0	0.0	2.9	3.8	3.8
Acres of Roads (All types)	7.0	0.0	0.0	0.0	7.0	9.9	9.9
Ac's of Harv Within RRAs	0	0	68	0	22	224	0
Miles of Forest System Roads within RRAs	0.5	0.0	0.0	0.0	0.5	3.6	1.4
Miles of OHV Experience within RRAs	2.9	0.0	0.0	0.0	2.9	0.7	2.9
% Seral Stage Distribution							
Mixed Conifer Type							
– Seral Stage 1	0	0	9	6	12	21	13
– 2,3 b/c	34	41	37	38	43	42	36
– 3a	2	2	2	2	1	1	1
– 4a	16	11	12	14	10	7	11
– 4 b/c	15	15	12	13	11	10	12
– 4b	14	15	12	13	10	9	12
– 4c	19	16	16	14	13	10	15
White Fir Type							
– Seral Stage 1	0	0	0	0	0	0	0
– 2,3 b/c	36	40	49	42	47	56	45
– 3a	0	0	0	0	0	0	0
– 4a	15	14	11	13	11	8	16
– 4 b/c	17	16	13	15	14	12	13
– 4b	17	16	12	15	13	11	12
– 4c	15	14	15	16	15	13	14
All Types							
– Seral Stage 1	0	0	5	3	6	12	7
– 2,3 b/c	41	46	47	45	50	52	45
– 3a	3	3	3	3	3	3	3
– 4a	14	11	10	12	9	6	11
– 4 b/c	14	14	11	12	10	9	11
– 4b	13	13	10	12	10	9	11
– 4c	15	13	14	13	12	9	12

KEY INDICATOR	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7
Wildlife Cover & Feeding Indices							
Deer Feeding Index (Planning Area)							
– T0: before treatment	0.32	0.32	0.32	0.32	0.32	0.32	0.32
– T1: immediately after trt	0.32	0.32	0.36	0.32	0.34	0.35	0.35
– T10: ten years after trt	0.31	0.31	0.34	0.31	0.33	0.34	0.33
– T20: twenty years after trt	0.31	0.31	0.34	0.31	0.32	0.33	0.33
– T30: thirty years after trt	0.31	0.31	0.33	0.31	0.33	0.33	0.33
Deer Cover Index (Planning Area)							
– T0	0.86	0.86	0.86	0.86	0.86	0.86	0.86
– T1	0.86	0.84	0.81	0.83	0.80	0.76	0.80
– T10	0.86	0.86	0.83	0.85	0.83	0.82	0.83
– T20	0.86	0.86	0.83	0.85	0.83	0.82	0.83
– T30	0.87	0.83	0.84	0.83	0.81	0.80	0.81
Deer Feeding Index (Key Deer Area Only)							
– T0	0.20	0.20	0.20	0.20	0.20	0.20	0.20
– T1	0.20	0.20	0.51	0.20	0.30	0.35	0.40
– T10	0.20	0.20	0.39	0.20	0.26	0.29	0.33
– T20	0.20	0.20	0.39	0.20	0.26	0.29	0.33
– T30	0.20	0.20	0.35	0.20	0.27	0.29	0.31
Deer Cover Index (Key Deer Area Only)							
– T0	1.00	1.00	1.00	1.00	1.00	1.00	1.00
– T1	1.00	0.98	0.69	0.82	0.74	0.64	0.67
– T10	1.00	0.99	0.81	0.93	0.88	0.83	0.83
– T20	1.00	0.99	0.81	0.93	0.88	0.83	0.83
– T30	1.00	0.97	0.85	0.91	0.85	0.81	0.82
Marten Feeding Index							
– T0	0.35	0.35	0.35	0.35	0.35	0.35	0.35
– T1	0.35	0.34	0.33	0.34	0.32	0.31	0.33
– T10	0.35	0.35	0.35	0.35	0.35	0.35	0.35
– T20	0.35	0.35	0.35	0.35	0.35	0.35	0.35
– T30	0.35	0.34	0.34	0.34	0.33	0.33	0.33
Marten Cover Index							
– T0	0.51	0.51	0.51	0.51	0.51	0.51	0.51
– T1	0.51	0.50	0.47	0.49	0.46	0.43	0.47
– T10	0.51	0.51	0.49	0.51	0.50	0.49	0.50
– T20	0.51	0.51	0.49	0.51	0.50	0.49	0.50
– T30	0.52	0.49	0.51	0.49	0.49	0.49	0.49
Blue Grouse Feeding Index							
– T0	0.39	0.39	0.39	0.39	0.39	0.39	0.39
– T1	0.39	0.39	0.39	0.39	0.39	0.39	0.39
– T10	0.39	0.39	0.39	0.39	0.39	0.39	0.39
– T20	0.39	0.39	0.39	0.39	0.39	0.39	0.39
– T30	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Blue Grouse Cover Index							
– T0	0.23	0.23	0.23	0.23	0.23	0.23	0.23
– T1	0.23	0.23	0.22	0.23	0.22	0.21	0.22
– T10	0.23	0.23	0.22	0.23	0.22	0.21	0.22
– T20	0.23	0.23	0.22	0.23	0.22	0.21	0.22
– T30	0.23	0.22	0.21	0.21	0.20	0.20	0.21

KEY INDICATOR	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7
Hairy Woodpecker Feeding Index							
– T0	0.15	0.15	0.15	0.15	0.15	0.15	0.15
– T1	0.15	0.14	0.14	0.14	0.13	0.12	0.13
– T10	0.14	0.13	0.13	0.13	0.12	0.11	0.12
– T20	0.15	0.15	0.14	0.15	0.14	0.13	0.14
– T30	0.17	0.16	0.16	0.16	0.15	0.14	0.15
Hairy Woodpecker Cover Index							
– T0	0.14	0.14	0.14	0.14	0.14	0.14	0.14
– T1	0.14	0.14	0.13	0.14	0.13	0.12	0.13
– T10	0.13	0.13	0.12	0.13	0.12	0.11	0.12
– T20	0.15	0.14	0.14	0.14	0.13	0.12	0.13
– T30	0.17	0.16	0.15	0.15	0.14	0.13	0.14
Goshawk Feeding Index							
– T0	0.67	0.67	0.67	0.67	0.67	0.67	0.67
– T1	0.67	0.65	0.67	0.63	0.59	0.55	0.60
– T10	0.66	0.65	0.61	0.63	0.60	0.57	0.61
– T20	0.67	0.65	0.62	0.64	0.61	0.57	0.61
– T30	0.68	0.63	0.62	0.61	0.58	0.54	0.58
Goshawk Cover Index							
– T0	0.63	0.63	0.63	0.63	0.63	0.63	0.63
– T1	0.63	0.61	0.57	0.60	0.56	0.51	0.56
– T10	0.65	0.63	0.59	0.62	0.58	0.53	0.58
– T20	0.65	0.64	0.59	0.62	0.58	0.53	0.58
– T30	0.66	0.61	0.60	0.60	0.55	0.51	0.56
Habitats for TES Species (1-10, Relative Scale)							
Goshawk	8	9	9	9	7	6	8
Marten	8	8	7	6	4	4	7
Snags per Acre (1-10, Relative Scale)	8	8	7	8	6	5	6
Road Density (Miles per Square Mile) - all roads	3.13	2.58	2.44	2.41	3.16	3.32	2.93
Transportation System Costs - Timber Sale							
Total Cost ($)	NA	187,226	289,175	198,600	519,864	973,544	580,801
Total Cost ($/MBF)	NA	85.10	42.65	56.91	65.15	69.84	74.46
New Road Construction Effects							
Increase in Acres Accessed	0	20	156	83	417	755	293
Incr. in Vol Accessed (MBF)	0	0	1538	208	3086	5857	3359
Road Density - Forest System Roads Only	2.48	2.25	2.11	2.08	2.61	2.96	2.42
Acres of High or Mod. Mineral Pot. Restricted	130	710	730	860	30	156	730

APPENDIX M.

SUPPLEMENTAL
BIOLOGICAL EVALUATION
for the
MT. VIDA PLANNING AREA
AND ITS POTENTIAL EFFECTS ON THE
NORTHERN SPOTTED OWL, CALIFORNIA SPOTTED OWL, MARTEN,
WILLOW FLYCATCHER, GOSHAWK AND SENSITIVE PLANTS

Prepared by: _____
Forest Fisheries Biologist

Date: 3/25/93

Reviewed by: _____
Forest Biologist

Date: 3/25/93

Recommended by: _____
District Ranger

Date: _____

SUPPLEMENTAL
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The purpose of this supplemental biological evaluation (BE) is to assess the effects of implementing the Preferred Alternative of the Mt. Vida Planning Area Final Environmental Impact Statement (FEIS) on several USFS sensitive species and to supplement the information contained in the BE prepared for the original Final Environmental Analysis (FEIS). This evaluation also considers new information presented in the Draft Supplement to the FEIS (DSFEIS). This supplement to the original BE is prepared in accordance with FSM 2670.42.

Subsequent to publication of the Mt. Vida FEIS, The U.S. Fish and Wildlife Service (FWS) published the boundary of the range of the northern spotted owl (*Strix occidnetalis caurina*) in the Federal Register and by USFS memo, June 28, 1991, and excluded the Mt. Vida planning area. Therefore northern spotted owls are excluded from this biological evaluation. The planning area is considered to be within the range of the California spotted owl (*Strix occidentalis occidentalis)*.

Other possible threatened or endangered species within the planning area were discussed in the BE for the FEIS.

DESCRIPTION OF PROJECT

The project description has not changed from that discussed in the FEIS and original BE, and is detailed in the DSFEIS for the Mt. Vida planning area.

AFFECTED ENVIRONMENT

California Spotted Owl (USFS Sensitive species)

Suitable habitat for spotted owls was surveyed in May and July, 1989 and again in May thru July of 1992. No spotted owls were detected; the 1992 surveys included 6 visits as specified by protocol survey methods, USFS, Region 5, 1991. The nearest known California spotted owl is located about 40 miles to the Southwest on the Big Valley Ranger District. Consistent with direction included in California Spotted Owl Sierran Province Interim Guidelines Environmental Assessment and Record of Decision, USFS, Janurary, 1993, the Mt. Vida project has been assessed in a Cumulative Effects Analysis (CEA). That CEA is on file at the Modoc NF Supervisors office and at the Warner Mountain Ranger District office.

Marten (USFS Sensitive species)

The Modoc NF Land and Resource Management Plan (LRMP) specified several marten territories, including 1 within the Mt. Vida planning area. The DSFEIS for this project discusses this territory in relation to the Mt. Vida project. Potential marten habitat was surveyed within the project area in 1992 as detailed at page III-3 of the DSFEIS. No marten tracks were detected in approximately 670 track plate nights.

Willow flycatcher (USFS Sensitive spp)

Willow flycatchers are not known to occur within the planning area. Further, no suitable willow flycatcher habitat (dense willow patches, 2-5 acres in size with abundant foliage within 3 feet of the ground) occurs within the planning area.

Goshawk (USFS Sensitive spp)

Two goshawk nesting territories occur within the planning area and management of those territories is described in the FEIS, page III-38.

Sensitive plants

The BE for the FEIS listed 4 sensitive plants that could occur within the planning area. Sensitive plant surveys in the planning area during the field season in 1992 did not locate any of the listed sensitive plants (DSFEIS, III-1). No federally listed threatened or endangered plant species are known to occur in the planning area.

EFFECTS OF THE PROPOSED PROJECT

The primary efect of the Mt. Vida proposal is removal of approximately 7.8 million board feet of timber from about 512 acres. Road construction (4.7 miles), reconstruction (4.8 miles), closure (4.8 miles), and obliteration (4.3 miles) are additional effects to wildlife habitat. Road closure and obliteration are usually beneficial to wildlife.

Direct effects of timber harvest and road construction on sensitive species are summarized as follows:

California spotted owl: Since the suitable habitat has been surveyed to protocol standard and no spotted owls were located, it can be assumed that no California spotted owls occur in the project area. This assumption is strengthened by additional survey results covering approximately 40,000 acres in close proximity to the project area in 1992. Those surveys did not locate any California spotted owl responses.

Marten: The affected marten territory has about 2759 acres of suitable habitat in the planning area. The proposed harvest comes from about 395 acres of suitable and 117 acres of unsuitable habitat, leaving about 2364 acres of suitable marten habitat, well above the 1900 acres specified in the Modoc NF LRMP. Harvest units will fragment the suitable habitat in the immediate vicinity of those units, however, as

detailed in the DSFEIS, much of this suitable habitat is fragmented at present due to "lay of the land" conditions in the Warner Mountains. (DSFEIS-III-2). Connectivity from the territory to adjacent suitable habitat is not affected. In terms of temporal effects, harvest units will return to forested sites as the stands grow. It is anticipated that harvested units will become suitable habitats for marten within 5-6 decades. Further, retention of snags and dead and down material as specified in the standards and guidelines of the LRMP will retain critical habitat components to dampen the effects of harvest.

Willow Flycatcher: Harvest and road building/closure/obliteration will not occur in habitats occupied by willow flycatchers. Implementation of standards and guidelines of the Riparian prescription of the LRMP will preclude any impacts.

Goshawks: Implementation of the Raptor prescription from the LMP will preclude any project induced effects to the two goshawk territories in the planning area. Sufficient suitable habitat will be retained and a limited operating season will be enforced adjacent to the territories.

Sensitive plants: Since no sensitive plants were located in field surveys in 1992, the project will not impact sensitive plants.

DETERMINATION:

It is my determination that implementing the preferred alternative in the Mt Vida FEIS and DSFEIS will have NO EFFECT on California spotted owls, marten, willow flycatcher, goshawk or sensitive plants within the project area. This determination is based on information presented in the original Biological Evaluation, this Supplemental Biological Evaluation, the FEIS and DSFEIS for the Mt. Vida Planning Area.

Further:

California spotted owls were not located in 6 protocol standard visits during the breeding season in 1992;

Habitat requirements for marten prescribed in the Modoc NF LRMP are exceeded following implementation of the project;

Neither willow flycatchers nor suitable willow flycatcher habitat are known to occur in the project area, and implementing the riparian prescription in the Modoc LRMP will prevent impacts to either;

Goshawks and suitable habitat will be managed by implementing the raptor prescription in the Modoc NF LRMP; and

No sensitive plants are known to occur in the planning area based on surveys conducted during the field season on 1992.

Modoc National Forest
Warner Mountain Ranger District
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Cedarville, CA 96104